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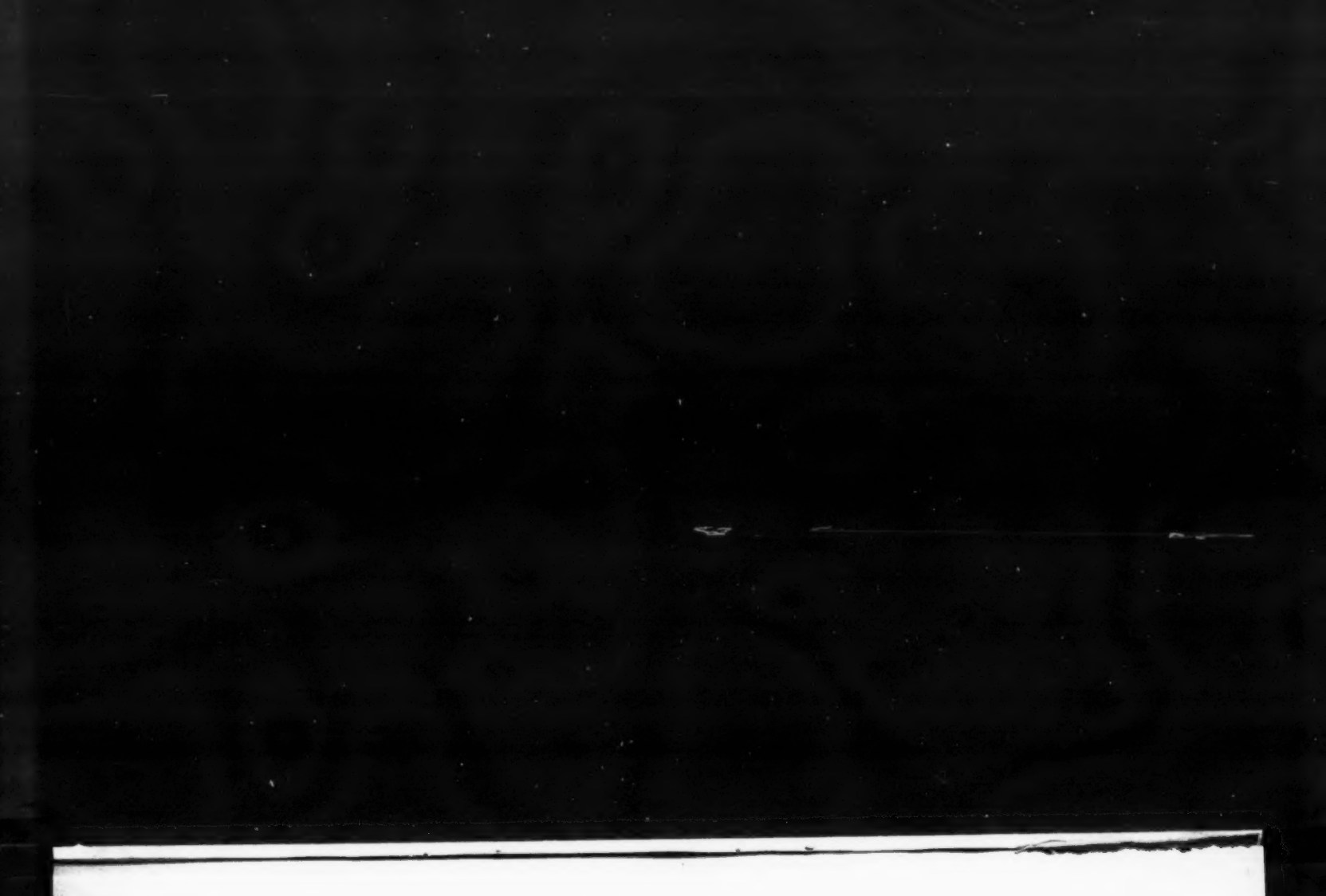

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POETRY.

ELEGY ON A LADY, WHOM GRIEF FOR THE DEATH OF HER BETROTHED KILLED. 778	THE FOOTFALL, 778 A CITY NIGHT. 778

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THE FOOTFALL.

There was a merry step within the garden,
When I was little, and the world was new,
I never dreamed that it was Time, the warden,
And that it was for him the roses grew,
And pansies blue.

Now, on the common road, with tramp of thunder,
A foot I hear that does not turn or stay,
And, after it, the tumult and the wonder
Of hurrying folk that throng, by night and day,
The crowded way.

Soon I shall reach an ample inn and olden,
And lie at ease upon a quiet bed.
No foot shall echo in the court withholden,
And Time shall steal away with soundless tread
When I am dead.

MARGARET ARMOUR.

ELEGY ON A LADY, WHOM GRIEF FOR THE DEATH OF HER BETROTHED KILLED.

Reach down the wedding vesture that has lain
Yet all unvisited, the silken gown:
Bring out the bracelets, and the golden chain
Her dearer friends provided: sere and brown
Bring out the festal crown,
And set it on her forehead lightly:
Though it be withered, twine no wreath again;
This only is the crown she can wear rightly.

Cloke her in ermine, for the night is cold,
And wrap her warmly, for the night is long;
In pious hands the flaming torches hold,
While her attendants, chosen from among
Her faithful virgin throng,
May lay her in her cedar litter,
Decking her coverlet with sprigs of gold,
Roses, and lilies white that best befit her.

Sound flute and tabor, that the bridal be
Not without music, nor with these alone;
But let the viol lead the melody,
With lesser intervalsand plaintive moan
Of sinking semitone;
And, all in choir, the virgin voices
Rest not from singing in skilled harmony
The song that aye the bridegroom's ear rejoices.

Let the priests go before, arrayed in white,
And let the dark stoled minstrels follow slow;
Next they that bear her, honored on this night;
And then the maidens, in a double row,
Each singing soft and low,
And each on high a torch up-staying:
Unto her lover lead her forth with light,
With music, and with singing, and with praying.

ROBERT BRIDGES.

A CITY NIGHT.

Come, let us forth, and wander the rich, the murmuring night!
The sky blue dusk of summer trembles above the street;
On either side uprising glimmer houses pale;
But me the turbulent bubble and voice of crowds delight;
For me the wheels make music, the mingled cries are sweet;
Motion and laughter call: we hear, we will not fail.

For see, in secret vista, with soft, retiring stars,
With clustered suns, that stare upon the throng below,
With pendant dazzling moons, that cast a noonday white,
The full streets beckon: Come, for toil has burst his bars,
And idle eyes rejoice, and feet unhasting go.
Oh, let us out and wander the gay and golden night!

LAURENCE BINYON.

From The Nineteenth Century.

RECENT SCIENCE.

I.

The year 1823 is a memorable date in the history of science. In that year Faraday, experimenting upon a suggestion of Sir Humphry Davy, succeeded in converting into the liquid state a number of gases which usually retain their gaseous condition, even at the lowest temperatures observed in the cold regions of our globe. His first steps became the starting-point for an immense number of investigations, which are now, after sixty-five years of hard work in different countries, so far crowned with success that there remains not one gas known which could not be turned into a liquid. At the same time, our knowledge relative to the structure of matter at such low temperatures as were formerly unattainable was immensely widened through these investigations, and a branch of industry which now produces rapid changes in the alimentation of mankind—the refrigerating industry—grew out of the scientific discoveries.

The familiar example of water, which assumes three different states, gaseous, liquid and solid, at different temperatures, had long since suggested to scientific men the idea that if all the gases which surround us, or are produced in our laboratories, could only be submitted to sufficiently low temperatures, or to sufficiently strong pressures, or to both at the same time, they would be compelled, like steam, to pass from the gaseous state into the liquid state. Since the end of the last century experiments have been made in that direction; but the only freezing mixture that was available in 1823 was ice and salt; while as regards pressures, the best air-pump which Faraday had at his disposal could produce a pressure barely ten times greater than the pressure of the atmosphere. Davy and Faraday overcame both difficulties in a very ingenious way. Suppose we take a strong glass vessel, and put in it some hydrate of chlorine. If we heat it, chlorine gas will be evolved; it will escape from the vessel, and fill our room. But suppose that we first seal the open end of the vessel, and then heat it. Chlorine will be evolved as before, but finding no room to escape to, it will accumulate and compress itself in the glass vessel much more powerfully than it could be compressed by an air-pump of indifferent make. Now take a vessel which has the shape of a tube, bend it as a roof is bent, and while you heat the end of the tube which contains the chemical, cool the other end. The gas will be both compressed and cooled, and it may be turned into a liquid.

This was Davy's idea. Add to it the keen intelligence, the manipulative skill and the wide knowledge of a Faraday, and the first step in the liquefaction of gases is made. Faraday saw, indeed, a clear yellow liquid deposited at the cooled end of his tube, and this liquid, he ascertained, was nothing else but liquefied chlorine—not a solution of the gas in some liquid, but pure chlorine gas which had changed its state and had become a liquid, just as condensed steam becomes water.

Faraday made a further discovery. He cooled the tube, and then it was opened, "when a part [of the liquefied gas] immediately flew off, leaving the rest so cooled by evaporation as to remain fluid under atmospheric pressure."[1] This was certainly a remarkable sight. There was a gas which had assumed the liquid state only under a pressure of six atmospheres, or at a temperature of twenty-nine Fahrenheit degrees below zero. But now it gently evaporated, or rather "boiled," in an open glass, under ordinary pressure and at the temperature of the room. Its rapid evaporation so much cooled the liquid that it did not find the heat that would be required

[1] *Philosophical Transactions*, 1823, vol. cxiii., pp. 160-165. The memoirs of Faraday, with some additional matter, have been reprinted in the *Alembic Club Reprints*, Edinburgh, 1896, No. 12. One cannot but express his gratitude to the editors for these excellent and most necessary reprints.

for evaporating all at once: it remained for a few minutes a liquid. In the first note of Faraday we thus have the substance of the experiment which provoked so much enthusiasm at Cracow in 1890, when the Cracow professor, Olszewski, showed to his audience a quarter of a pint of liquid oxygen gently boiling in an open glass, or when Professor Dewar repeated, a couple of years later, the same experiment on a larger scale before a London audience.

A few weeks after his first communication Faraday announced his further successes.[2] Sulphurous acid (or, properly, sulphurous anhydrid, *i.e.*, the gas which is evolved when we burn sulphur), carbonic acid, the ammonia gas, sulphuretted hydrogen, nitrous oxide and hydrochloric gas had been liquefied in the same way. True that many gases, and especially oxygen, nitrogen and hydrogen, would not become liquids in these conditions; but the way to obtain lower and lower temperatures and to liquefy other gases was already indicated. The cooling effects of rapidly evaporating water are familiar to everyone; but a liquefied gas, which has only been obtained under high pressure, evaporates much more rapidly than water and produces a still greater degree of cold. In fact, the liquefied ammonia gas gives already a temperature of —31° Fahr., while liquid carbonic acid, which is obtained under a pressure of seventy atmospheres, produces a cold of about —100° Fahr., and this low temperature gives the means for condensing some other still more volatile gas.[3]

The ball was now set rolling. Bunsen took up the same researches; Natterer, a young Viennese chemist, devised a pump for compressing gases which soon became a familiar feature of all physical laboratories; while Thilorier, in 1835, made a further important step. He brought carbonic acid into the solid state, obtaining it in the shape of a block of ice,[4] and this discovery was soon utilized in this country by Mr. Addams for industrial purposes. By pouring ether upon solid carbonic acid, Thilorier produced a freezing mixture which could maintain for a long time a temperature as low as —85° of the Fahrenheit thermometer. (All temperatures will be given in these pages on the Fahrenheit scale.)

The effect of these discoveries upon the general progress of science has never yet been fully appreciated. It was, nevertheless, very great. To acquire the certitude that all gases may be turned into the liquid and the solid state was already a great step in natural philosophy; but to see, moreover, that the molecules of a gas may be deprived of their mobility, and lose their tendency to scatter into space, either by cooling the gas or by mechanically compressing it, was to prepare the ground for a general acceptance of the mechanical theory of heat, the liquefaction of gases demonstrating to the least credulous that a loss of heat means a loss of *mechanical energy*, with which the particles of the gas were animated.

However, there was a point upon which ideas were not yet clear in the first quarter of this century. In a short note published in 1823, Sir Humphry Davy expressed the then current idea that in order to liquefy a gas we must either compress it or cool it; compression, he said, may be taken as a substitute for cooling.

So it is in reality, but within certain limits only. It became known, from the work of Cagniard-Latour (in 1822) and Faraday, and it was definitely proved by Mendeléeff (in 1861), and especially by Andrews (in 1869), that for each gas there is a certain *critical temperature*, above which no increase of pressure can turn it into the liquid state. Hydrogen, for instance, may be submitted to a pressure of several

[2] *Philosophical Transactions*, vol. cxiii., pp. 189-198; *Alembic Club Reprints*, No. 12.

[3] When one speaks of Faraday, it is needless to say that his first preoccupation was to find out who were his predecessors in the same branch of research, and to pay them homage. He did it in a paper contributed to the *Quarterly Journal of Science*, Jan. 1824, pp. 229, 240. *Alembic Club Reprints*, No. 12, p. 19.

[4] *Annales de Chimie*, 1835, vol. lix., p. 427.

thousand atmospheres, and be squeezed to one-thousandth part of its original volume; but so long as its temperature remains above its critical point (which is, we now know —391° Fahr.), it does not become a liquid; its molecules still remain animated with the movements that are characteristic of gases. Each gas has its own critical temperature, some of them a very low one, and that degree of cooling must be reached before the gas becomes a liquid.[5]

When Faraday resumed his liquefaction researches in 1845, he knew already that "there are some results producible by cold which no pressure may be able to effect;" and, taking advantage of Thilorier's mixture and generally improving his apparatus, he not only liquefied, in larger quantities, all the gases which he had brought to the liquid state in 1823, but also liquefied several other gases, of which the most important was the olefiant gas. He obtained, moreover, in the *solid* state ammonia, cyanogen, sulphurous acid, sulphuretted hydrogen, and especially nitrous oxide, which had been liquefied by Natterer the year before. With the aid of all these achievements it became possible to attain a temperature as low as —132° by merely evaporating olefiant gas under the ordinary pressure, and still lower than that when the evaporation was hastened by means of an air-pump. However, chiefly on account of the costliness of such researches, it took fully thirty-three years before the next step of importance—namely, the liquefaction of oxygen—was accomplished, in 1877, almost simultaneously by Cailletet at Paris and Raoul Pictet at Geneva.

Pictet's method was a great advance upon the methods of both Natterer and Faraday. His leading idea was to obtain very low temperatures by stages—"*en cascades*," as he wrote.[6] Sulphurous acid can be liquefied very easily; but when that liquid has been obtained and is made to rapidly evaporate it produces an intense cold of —102°. If we now place in a vessel so cooled a long tube filled with compressed carbonic acid gas,[7] the latter will be liquefied in its turn; and when liquid carbonic acid is rapidly evaporated, the cold attains 220° below the Fahrenheit zero. This is certainly a very low temperature, and yet it was not low enough to liquefy oxygen. Then Pictet took supplementary advantage of another method which already had been resorted to with success. He first compressed oxygen under a pressure of 450 atmospheres and in a temperature of —220°, and then he suddenly released the pressure. The gas immediately expanded. But a gas for its expansion must borrow heat (or rather mechanical energy for its molecules) from its surroundings; and as the surroundings were kept at —220°, it had to borrow it chiefly from itself—that is, its temperature was lowered still further, and the gas was partially brought into the liquid state. Nay, even icicles of the solid gas were detected in the liquid jet by means of the polariscope.

Cailletet, who had prosecuted for years most admirable studies into the properties of gases, and had already made many important contributions to this subject, obtained the same result, a few days before Pictet, in a slightly different way. His apparatus was an immensely improved apparatus of Natterer's, provided with a very ingenious mercury pump of Cailletet's invention. The gas he intended to liquefy was compressed to 300 atmospheres in a strong glass tube, surrounded by a freezing mixture. Then the pressure was suddenly released, and part of the compressed and cooled gas was liquefied. A net separation between the transparent gas and the also transparent liquid could easily be seen in the glass tube.

With this apparatus Cailletet made,

[5] A detailed account of the so-called "critical state of matter" was given in this Review in April, 1894, p. 679 *seq.*

[6] Pictet, *Mémoire sur la liquéfaction de l'oxygène*, Genève, 1878; reprint from the *Archives des Sciences naturelles.*

[7] Some of Pictet's tubes attained a length of 16 1-2 feet.

in 1877, the first step towards the liquefaction of the so-called "permanent gases," which had hitherto resisted the manipulations of physicists. On the 5th of November he announced at the Paris Academy that acetylene had been turned into a liquid—a very important step, as acetylene gave now the means for obtaining still lower temperatures. A few days later it was nitrous bioxide which had been overpowered;[8] and on the 24th of December the veteran chemist Dumas announced the almost simultaneous liquefaction of oxygen by Cailletet at Paris and Pictet at Geneva.[9] More than that. When Cailletet submitted hydrogen to the same manipulations, he saw a fog appearing in his tube. Boussingault, Berthelot, and Sainte-Claire Deville, to whom this fog was shown, greeted in it the first sight of liquid hydrogen, at least, in the shape of a cloud floating amidst the gas.

But this was not sufficient. Nitrogen, atmospheric air and hydrogen had still to be obtained in the so-called "static state;" that is, their liquid molecules had to collect together, and to be as well separated from the gaseous molecules as water is separated in a tumbler from the surrounding air. To obtain liquid oxygen in large quantities, and to use it for condensing nitrogen and hydrogen, became, therefore, the watchword, and Cailletet already sketched, in 1883, an apparatus which could produce large quantities of liquid oxygen through *continuous* action, but which he could not construct on accountof want of money. In the meantime, he paved the way for further conquests, and in company with Hautefeuille he studied, partly in roundabout ways, the densities of liquid oxygen, hydrogen and nitrogen.[10]

[8] *Comptes Rendus*, 1877, t. lxxxv., pp. 851 and 1016.

[9] *Ibid.*, December 24, 1877, t. lxxxv.

[10] See his different memoirs in *Comptes Rendus*, 1877, t. lxxxiv., p. 1270; 1882, t. xciv., p. 1224; 1883, t. xcvii., p. 1115; 1884, t. xcviii., pp. 236, 305. His fundamental researches into the compressibility of gases are in t. lxxxviii., 1879, p. 61.

II.

It was at Cracow that the next successes were achieved, when two professors of the Cracow Academy, Wróblewski and Olszewski, aided by Witkowski, entered the same field. Wróblewski's apparatus was substantially the same as Cailletet's; that is, the gas which he wanted to condense was compressed in a thick glass tube of very small inner diameter; but the release of pressure could be made much more rapidly, by means of a special valve. He began his work by carefully studying the critical temperatures and the critical pressures of the co-called permanent gases, and compared the cooling effects of acetylene with those of oxygen. He found that the latter, on being suddenly evaporated, may produce a temperature as low as —302° Fahr. without solidifying, and thus offers a better cooling agent. He obtained it in large quantities subsequently to 1882, and used it both for scientific studies and as a freezing mixture. With the aid of it he produced liquid and solid, or at least jelly-like, nitrogen; and next, after having liquefied marsh gas, he showed to his audiences that, once liquefied, it can be poured into an open glass in an ordinary room (he had done the same already with ethylene), and that the liquid will quietly "boil," although its temperature of "boiling" is as low as from —247° to —256°. All this was done in 1883.

Finally, on the 21st of January, 1884, he telegraphed to the Paris Academy: "Hydrogen, cooled by boiling oxygen, has liquefied by sudden release of pressure" (*par détente*). That is, after having strongly compressed and cooled hydrogen to a temperature of —302° Fahr., he suddenly released the pressure, and then he saw an ebullition going on in the tube, just as Cailletet had seen it for oxygen.[11]

Not satisfied, however, with this first success, Wróblewski continued the purely scientific work of measuring

[11] *Comptes Rendus*, January 1884, t. xcviii , pp. 304–305.

with great care (by means of a thermopile) the critical and ebullition temperatures of the so-called permanent gases. He liquefied both atmospheric air and nitrogen in measurable quantities, and he obtained, with the aid of liquid air, the temperature of —338°. Liquid air, he considered, would be the means for obtaining still lower temperatures. "It will be compressed"—he wrote as early as 1884[12]—"in metallic recipients to the critical pressure. Then, by letting it pass through other recipients, already cooled, it will be liquefied, and on turning the cock it will flow as a fluid, just as this is already done for sulphurous acid."

Olszewski, who separately prosecuted, also at Cracow, the same researches, worked very much on the same lines, also with a slightly improved Cailletet apparatus. Small though his apparatus was, he obtained with it extraordinary results. He liquefied oxygen, nitrogen, atmospheric air, carbon monoxide, nitric oxide and methane, some of them in quantities of from 6 to 100 cubic centimetres (one-third to six cubic inches); and he brought nitrogen, carbon monoxide, nitric oxide and marsh gas to the solid state. He carefully measured also the critical and boiling temperatures of the just-named gases, and reached the temperature of —373° (86 Fahr. degrees within the absolute zero)—that is, the lowest temperature that was ever reached before 1895. And, finally, a few weeks after Wróblewski—that is, in February, 1884—he also announced to the Paris Academy that after having cooled hydrogen in boiling air under a pressure of 190 atmospheres, he saw, on suddenly releasing the pressure, that hydrogen was "boiling" in the tube, droplets of it being projected and running down the glass.[13] In 1887, Olszewski further improved and enlarged his apparatus, and went further on in the study of the physical properties of the refractory gases. Using liquid oxygen as a cooling agent, he obtained quite pure ozone, in the shape of a dark-blue liquid, easily and violently exploding, and, like Wróblewski, he took advantage of each new achievement to enrich science with solid data.[14] Thus, he proved that the color of the sky is due, not to floating dust, but to the blue color of thick layers of oxygen. In 1890 he was in possession of a bigger apparatus, from which he could obtain 12 cubic inches (nearly half a pint) of liquid oxygen, and drawing it as a common liquid out of his apparatus, he collected it, like his predecessors, in an open vessel, in which the gas remained in the liquid state for half an hour before large audiences.[15] Persevering further in his work, Olszewski soon saw liquid nitrogen covered with a solid crust of ice (at —353°), after which the whole mass was transformed into snow; the same was done with carbon monoxide at —348°,[16] but even at —373° oxygen could not be solidified.

In the year 1884 the low temperature

[12] *Ibid.*, April 21, 1884, t. xcviii., p. 985. His other memoirs are in t. xcix., 1884, p. 136; t. c., 1885, p. 979; t. ci., 1885, pp. 100, 635. He died, unfortunately, before he had attained the goal of his work.

[13] *Comptes Rendus*, February 11, 1884, t. xcviii., p. 365.

[14] Wróblewski and Olszewski did not agree within a few degrees for the many different temperatures they were determining, the former using a thermopile and the second trusting to the hydrogen thermometer, so long as the temperature he measured was not near to the critical temperature of hydrogen.

[15] *Bulletin International* of the Cracow Academy (published in French), June 1890. The system of his apparatus was as follows: ethylene, cooled by ice with salt, passed through a coiled tube plunged into solid carbonic acid with ether. There it was liquefied, and entered a reservoir, where it was rapidly evaporated by means of pumps. A steel tube containing compressed oxygen was placed in that reservoir, and the evaporation of ethylene liquefied oxygen, which was drawn by means of a cock in the liquid state.

[16] *Comptes Rendus*, February 9, 1885, t. c., p. 351. A full list of Olszewski's works up to 1895 is given in *Philosophical Magazine*, 1895, 5th series, vol. xxxix., p. 212. Besides his original memoirs in Polish, he published detailed abstracts in French, in 1884–1885, in *Comptes Rendus*, vols. xcviii.–ci., as also in German in *Wiedemann's Annalen*. All his works since 1889 were also published in French in *Bulletin International de l'Académie de Cracovie*.

researches were resumed in this country by Professor J. Dewar. His first apparatus was the usual Cailletet pump, modified in some respects.[17] What work was done with this apparatus I don't exactly know, because Professor Dewar's communication to the Royal Institution, "On Liquid Air and the Zero of Absolute Temperature," which was made on June 5, 1885, is only mentioned in the *Proceedings* by its title, and I find no traces of it in the lecturer's subsequent writings.

Two years later Professor Dewar constructed a new, more effective apparatus, described in a lecture on meteorites, delivered in June 1886.[18] As in Pictet's apparatus, the low temperature was reached in it in two stages, by means of solid carbonic acid first, and of boiling acetylene next. But instead of using, as Pictet did, two separate glass tubes of great length, Professor Dewar resorted to a coiled metallic tube, such as is largely used in refrigerating industries. The coiled tube described two spirals, one within the other, and while the outer one was plunged into solid carbonic acid, the inner one was surrounded with boiling acetylene. The vapors of the latter passed in an annular space between the two coils. This certainly rendered the apparatus much more handy, and permitted Mr. Dewar to obtain a continuous supply of liquid oxygen, so long as the supply of acetylene was not exhausted.[19] In June, 1891, Professor Dewar showed this apparatus in his lecture on Faraday's centenary at the Royal Institution,[20] and obtained from it liquid oxygen, with which he also demonstrated the liquefaction of ozone. In January, 1893,[21] lecturing on "Liquid Atmospheric Air," and next year, in a lecture on the "Scientific Uses of Liquid Air,"[22] Professor Dewar, using considerable quantities of previously prepared liquid acetylene, obtained liquid air before his audience, in an open tube, and repeated at the Royal Institution the exciting experiment of Olszewski. He showed to his audience a glassful of liquid air slowly boiling in an open vessel placed within another vacuum vessel.[23]

However, neither with Professor Dewar's new apparatus, nor with Olszewski's, could a further step be made towards the solution of the great problem which haunted so many chemists—the liquefaction of measurable quantities of hydrogen. Those who devoted their energies to low temperature research turned in the years 1887–1895 their chief attention to the study of the physical properties of matter at low temperatures which was inaugurated by Cailletet, Wróblewski and Pictet. Pictet, now removed to Berlin, organized there a big laboratory for low temperature research, and by means of powerful machinery could

[17] The gas which he desired to liquefy was compressed in a small glass tube, one-tenth of a cubic inch of capacity, which was placed in another vessel containing "liquid ethylene, solid carbonic acid or liquid nitrous oxide" which had to be boiled *in vacuo*. Moreover, the vapors, on their way to the air-pump, were made to pass round this vessel, thus further cooling it (*Proceedings of the Royal Institution*, vol. xi., 1884, p. 148).

[18] Its substantial parts were figured in *Industries*, July 16, 1886, and again in the *Proceedings of the Royal Institution*, 1886, vol. xi., p. 541 *seq.*

[19] In the same lecture Professor Dewar said: "The lecturer exhibited at work the apparatus by which he had recently succeeded in *solidifying* oxygen." There must have been some mistake in this assertion, or may be icicles were seen in the jet, as was the case in 1877 with Pictet.

[20] *Proceedings of the Royal Institution*, vol. xii., pp. 482–488.

[21] Lecture on "Liquid Atmospheric Air," in same *Proceedings*, vol. xiv., p. 1.

[22] Same *Proceedings*, vol. xiv., p. 393.

[23] Of these vessels first employed by Cailletet, Professor Dewar had made a special study, and had considerably improved them. The way in which Professor Dewar spoke in these two lectures, or rather omitted to speak, of his predecessors, induced Olszewski to himself speak of his work in a letter addressed to *Nature* (Jan. 10, 1895, vol. li., p. 245), and to publish in the *Philosophical Magazine* (1895, vol. xxxix., p. 212) a full account of his more than ten years' well-known work in that domain. Besides, Mr. Pattison Muir published in *Nature* (vol. li., pp. 364, 389) two letters, in which he severely discussed Professor Dewar's attitude, and gave a nearly full bibliography of the works of Wróblewski, Olszewski, and Dewar. Professor Dewar's replies may be read in *Nature* (vol. li., pp. 245, 366, 413).

maintain his refrigerators for any amount of time at a temperature of —328° Fahr. He utilized them partly for scientific studies, and partly for industrial purposes, such as the preparation of chemically pure chloroform. Wróblewski, in 1885, and Olszewski, in 1887, studied the absorption spectrum of liquid oxygen, and the latter found that it contained those bands of the solar spectrum which long since had been suspected to be of terrestrial origin.[24] Professor Dewar continued the same investigations in 1889, extending them to ozone,[25] and they were further completed by Olszewski in 1892. Wróblewski began in 1885 the study of the electric conductivity of bodies at very low temperatures,[26] which was very much extended by Professors Liveing and Dewar, and Professor Dewar made in 1891 the interesting discovery that liquid oxygen, placed between the poles of the well-known Faraday magnet, leaped to the poles and remained attached to them until it was evaporated.[27] And, finally, Olszewski, following Pictet, made a series of careful investigations into the chemical properties of different bodies and the loss of chemical affinity at very low temperatures. Phosphorescence at low temperatures was also studied by Pictet[28] and Professor Dewar.[29]

All gases had thus been brought to the liquid state with the exception of hydrogen, the newly discovered helium, and fluorine, which had recently been obtained by Moissan, after it had been known to exist for so many years since through its compounds. All other gases had been handled as true liquids, in measurable quantities, while hydrogen had only been seen in clouds or droplets, not yet collected into a liquid mass. True that Olszewski, in 1895, achieved with regard to hydrogen a remarkable feat: without having had a liquid mass of it, he nevertheless determined the critical temperature at which it can liquefy, namely —391° Fahr., and the temperature at which it will boil under ordinary pressure, namely —409° Fahr.; but the former was so much lower than the temperature which could be obtained by means of liquid oxygen or air that he almost gave up the idea of obtaining liquid hydrogen, until some new gas should be discovered whose density and ebullition point would lie between those of nitrogen and hydrogen.

This conclusion was quite correct as regards the methods of liquefaction which had hitherto been in use. But could not some new method be devised? This was done, indeed, by Professor Linde, at Munich.

His discovery was not accidental. It was the result of a long study of the thermodynamics of refrigerating machines which brought him to the following idea: Joule and William Thomson had shown, some forty years ago, that if compressed air be suddenly expanded by letting it pass through a constricted orifice, it is cooled to a certain extent. Linde found from his mathematical and experimental researches that the cooling would be small, but he concluded that if the same mass of air were used *repeatedly* to pass through the same stages of expansion and compression, the cumulated effect of cooling would be capable of bringing it from the temperature of our rooms to that of —330°, or less, *without the use of any freezing mixture*, such as liquefied gas. And he constructed, on this principle, a machine for liquefying air, with the view of thus obtaining pure oxygen from

[24] *Comptes Rendus*, 1887, t. ciii.; *Nature*, vol. xxxvi., 1887, p. 42; and again in 1891 (*Ibid.*, 1891, vol. xliii., p. 498).

[25] *Nature*, 1889, vol. xl., 212.

[26] "On the Electric Resistance of Copper at the Temperature 200 degreees C. below zero, and on the Insulating Properties of Liquid Oxygen and Nitrogen," in *Comptes Rendus*, 1885, t. ci., p. 160.

[27] Lecture at the Royal Institution in May, 1893 (*Nature*, 1893, vol. xlviii., p. 89); *Proceedings of the Chemical Society*, Jan. 14, 1896; *Philosophical Magazine*, 1893, vol. xxxvi., pp. 271, 328; 1894, vol. xxxviii., p. 235; *Comptes Rendus*, 1895, t. cxxi., p. 162; (with Professor Fleming) *Proceedings of the Royal Society*, 1896, vol. lx., pp. 57, 76, 81, 358; and 1897, p. 425; 1897, vol. lxi. pp. 299, 316, 358, 368, 388.

[28] *Comptes Rendus*, 1892, t. cxix., p. 527.

[29] *Proceedings of the Chemical Society*, 1894, No. 142, p. 171.

the air. This was certainly a brilliant idea—so correct, indeed, that when Linde made experiments with his apparatus at the congress of the German engineers in August, 1895, he could obtain more than eight quarts of liquid air in one single public experiment. The first full description of Linde's method and experiments was given by Schrötter, in the *Zeitschrift des Vereins deutscher Ingenieure* for the 28th of September, 1895, pp. 1157–60.[30]

The same year—that is on the 23d of May, 1895—Dr. W. Hampson patented in this country an apparatus based on the same principle. The specification, however, was rather vague, and the patent was only printed in April, 1896, and then described in *Nature*.[31] Oxygen, or any other gas which it is intended to liquefy, is first compressed under a pressure of 170 atmospheres at the ordinary temperature of the room. It passes through a long tubular coil which is rolled into three concentric spirals. Then it is let to suddenly expand through a special nozzle which produces a so-called "liquid jet;" but instead of letting that jet be lost, it is used to cool the oxygen in the coils, and in a very short time it has so much cooled the latter that liquid oxygen drips from a cock.

At the end of the same year (on the 19th of December, 1895), Professor Dewar also produced before the Chemical Society an apparatus based on the same principle.[32] Like the apparatus of Linde and Hampson, it represented a new departure, and thus was much superior to all that had been used for the liquefaction of gases before the year 1895. With the aid of it air was brought, indeed, from the temperature of the room to its liquefaction temperature in a few minutes; and although, in trying hydrogen, Professor Dewar did not obtain the liquid in a static state, he obtained a "liquid jet," by means of which, with a further improvement of the apparatus, he hoped to obtain the real liquid.

With the aid of his new apparatus, adapted for that special purpose, Professor Dewar succeeded, in May, 1897, in liquefying fluorine. The gas, prepared by Moissan, was turned into a clear yellow liquid possessing great mobility, at a temperature very near to that of boiling oxygen—that is —301° Fahr. And, finally, in May last, Professor Dewar was able to announce that he, aided by Mr. Lennox, had accomplished at last the feat of obtaining both hydrogen and helium in the liquid state. "On the 10th of May," he wrote, "hydrogen, cooled to —205° C. (—337° Fahr.), and under a pressure of 180 atmospheres, escaping continuously from the nozzle of a pipe at the rate of about 10 cubic feet to 15 cubic feet per minute, in a vacuum vessel double silvered and of special construction, all surrounded with a space kept below —200° C., liquid hydrogen commenced to drop from this vacuum vessel into another doubly isolated by being surrounded with a third vacuum vessel. In about five minutes 20 cubic centimetres (1¼ cubic inch) were collected."[33] Hydrogen in the liquid condition is clear and colorless, strongly refractive, and its density must be in excess of what it was supposed to be on theoretical grounds. The temperature at which liquid hydrogen boils at the ordinary pressure must be very low(—409° according to Olszewski's measurement), and by boiling it in a

[30] Translated, with partial omission of the mathematical portion, in *Engineer*, August 4, 1895. See also Hospitalier in *La Nature*, November 16, 1895, vol. xxiii., p 400; and Professor J. A. Ewing's lecture on Linde's method in *Journal of the Society of Arts*, March 11, 1898, p. 375. For Linde's previous work see the same *Zeitschrift*, 1895, vol. xxxix., p. 124.

[31] *Nature*, April 2, 1896, vol. liii , p. 515. Professor W. A. Tilden also gave a description of it in *Revue Générale des Sciences*, April 28, 1896, p. 329.

[32] Paper read before the Chemical Society on December 19, 1895 (*Proceedings* of the society issued on Jan. 14, 1896; *Nature*, vol. liii., p. 329 *seq.*). In mentioning this apparatus, the editor of the *Engineer* wrote (December 6, 1895): "The apparatus used by Professor Dewar is identical with that used by Professor Linde, with the addition of a vacuum chamber," and he "looked in vain . . . for Professor Dewar's acknowledgment of his indebtedness to Professor Linde."

[33] *Nature*, May 19, 1898, vol. lviii., p. 55.

vacuum very probably a still lower temperature will be reached.

Leaving now totally aside the question as to the originality of Professor Dewar's new apparatus,[34] it may be said that, so far as can be judged from the hitherto published short notices, it represents a skilful combination of the idea of repeated self-cooling—whether it be Linde's, Hampson's, or Dewar's—with arrangements for obtaining the lowest temperature possible by means of liquid air, and an appropriate use of silvered recipients surrounded by vacuum vessels, of which Professor Dewar had made a special study. It took a year to construct the apparatus, and many months to submit it to preliminary tests.

The long chain of successive liquefactions of gases, which were begun at the end of the last century, is thus concluded. All known gases have now been liquefied, and the physicists and chemists can henceforward obtain temperatures lying within 35 to 50 Fahrenheit degrees from the so-called absolute zero of temperature (—459° Fahr.). A possibility is thus given to study physical bodies in the vicinity of that point, which represents, so to say, the death of matter—that is, the absence of the molecular vibrations which we describe as heat. It is impossible yet to say what the conditions of matter are when all the heat vibrations of its molecules are brought to a standstill. One thing is, however, certain: the chemical properties of different bodies are totally altered in such conditions. Bodies which violently combine together at ordinary temperatures lose their chemical affinities and energy. Even fluorine—that gas which for so long a time could not be isolated from its compounds because its affinities are so strong—shows no or but little affinity towards the bodies it so violently combines with at ordinary temperature; it only maintains its attachment for hydrogen, which resists even the deadly cold. The means of obtaining liquid hydrogen in larger quantities will soon be found, and thus a field for quite new researches, as also undoubtedly for new generalizations, will be thrown wide open.

[34] It has been contested by Dr. W. Hampson, who claims that he explained its idea, and showed his drawings (now published), to Professor Dewar's assistant, Mr. Lennox, in December, 1894. See the letters of Dr. Hampson and Professor Dewar on this subject, published in *Nature*, May 26 and June 9, 23, and 30, and of Dr. Hampson and Mr. Lennox, in *Engineering*, from March 25 to May 13.

III.

One of the problems which have most engrossed the attention of mechanical engineers and students of physical science for the last thirty years has been the utilization of various sources of motive power which we find in Nature—the force of the wind, the waterfalls, solar heat, and so on—and the transport of the power which may be derived from these sources to the spots where it may be required for industrial or household purposes. The most laborious researches have been made in this direction, mechanical art going hand in hand with theoretical physics, and there being, perhaps, no other branch in which every step in advance, in either mechanical or physical science, so much facilitated the task of the other and so much widened the conceptions of both.

That the productive powers of man have been increased more than tenfold since the energy stored in our coalfields has been brought into man's service by means of the steam-engine, and that the aggregate force of the steam-motors which are at work in civilized communities is equal to the force of many hundred millions of men, each of which requires but a few pounds of coal for its daily maintenance, has often been said and repeated. However, this is one aspect only of the case; the other and far more important aspect being that with the steam-motor man was riveted no longer to the natural sources of energy which he found on the surface of the globe. A lump of coal became a source of motive power which could be taken to any spot of the earth—to an African desert

or to an arctic wilderness, to a bare rock, to a stone quay in a harbor, to a plain or to a marsh; it could be placed on wheels and run full speed along a line of metals, or it could be stored in a boat and used to steam that boat across the ocean. Owing to the steam-motor, energy became transportable to any amount and to any distance from its original source. It is evident, therefore, that if any other natural source of energy be widely called into man's service, the power derived from it must be as easily transported and as easily subdivided as a cartload of coal is transported and subdivided among a number of customers.

To consider now the question of other sources of energy than coal is certainly not in the least extravagant. We have often been warned lately, from competent quarters, that if the extraction and waste of coal continue to augment as they have augmented within the last half a century, the coal-fields of the globe would be worked out within the next hundred years. Besides, owing to the very principle of the steam-engine, motive power generated by steam must remain costly, especially in the small industries where small motors only are wanted. And yet, in proportion as the needs of a civilized community grow more and more complicated, thousands of small industries develop every year by the side of the big ones. Small motors are now in demand on every farm, in thousands of small workshops, even in the bigger houses for household work, and they must be of a small size, and not be encumbered by a steam-boiler, so as to be easily placed in the corner of a room, on a small boat, on light bicycle wheels, nay, even on a flying machine. Delocalize energy, render it available at any imaginable spot, fixed or movable—this is now the order of the day.

Gas and naptha engines, in which common gas or naptha vapors, mixed with air, are exploded under the piston of the engine, is one of the replies to this call. Steam and cumbrous steam-generating boilers are dispensed with in these engines, which are light and handy and can be placed anywhere. Thousands and thousands of such small engines have consequently come into use with the small industries, the hot-house gardeners, the hotels, and so on, and they have already accomplished quite a revolution in the characters of various branches of production.[23] Machines working by means of compressed and liquefied gases, sold in bottles, or by means of various explosives, ought also to be mentioned under this heading; but these motors of the future are yet in their infancy.

Other sources of energy, of which Nature is so prodigal, have also been looked for. Under the scorching sun of Algeria and the Sahara, Mouchot and other Frenchmen tried to utilize solar energy, by constructing machines in which the heat of the sun was used as a fuel for a steam-engine or for other motors. The hot-water springs of Iceland and the force of the tides have also been thought of as sources of power, and the latter have been experimented upon. But the force of the wind and the energy of the rivers and waterfalls are two such great stores of motive power that they had to be utilized first, before man would go in search of energy to Iceland, or construct costly dams to utilize the tides. In fact, the old friend of man, the windmill, has lately been so much improved that in its modern garb of a self-adjustable wheel it is already a familiar feature of agricultural landscape in France and America. Suffice it to say that, according to recent statistics, more than one million of such windmills are already at work on the farms of the United States alone, pumping water, irrigating, turning churns and other dairy machinery, chopping turnips and straw, and performing all sorts of useful work.

The cheapest, as also the oldest, source of motive power is certainly running water. All great industries were born by the side of water-wheels,

[23] More than 50,000 gas-engines (350,000 horse-power), of the "Otto" type, have been sold in less than twenty years by the chief makers of this type of engines.

and our ancestors already knew the advantages of transporting the motive power of waterfalls to a certain distance, by means of aqueducts and canals used to drive water-wheels. Less costly and more efficacious systems were also thought of long ago. Already, in 1839, a French engineer, Andraud, proposed to utilize the force of the Rhône to compress air, which could afterwards be sold in bottles, in retail, as stored motive power.[36] His idea was so correct that compressed air, transmitted along a system of pipes, really became the first means for transporting motive power to a distance. It was used with success for mining under the bed of the Loire, for building under water the pillars of the Kehl Bridge across the Rhine, and especially for piercing the Mont Cenis tunnel in the Alps. The perforating machines in this tunnel, which has a length of eight miles, were worked by motive power borrowed from a waterfall and transmitted through strong pipes, by means of compressed air.

An important discovery, the full meaning of which is only now apparent, was made during that pioneer work. It appeared that (due precautions being taken against leakage) the loss of energy of the compressed air was diminished in proportion as the pressure under which it was transmitted was increased. A smaller volume of air under a great compression answered better than a bigger volume of less compressed air. This principle was applied later on to the transmission of natural gas from Indiana to Chicago, and, in fact, proved to be true for all modes of transmission of energy, pneumatic, hydraulic or electrical. A whole system of transmission of motive power by means of compressed air was established later on at Paris by Popp, and it worked quite satisfactorily. True, the losses of energy under this system were very great (they were estimated at 70 per cent.), but no better means were known at that time; and when the utilization of the power of Niagara was brought under discussion in 1890, it was thought at the outset that compressed air would be, after all, the most economic means for the transmission of the energy borrowed from the waterfalls.

In the meantime, a quite new departure, namely, the hydraulic transmission of power, was made at Geneva.[37] Horizontal waterwheels of a perfected construction, *i.e.*, turbines, driven by the Rhône at its issue from Lake Leman, were established to pump water to a high-level reservoir, whence it was distributed by means of pipes for consumption in the houses; but being supplied at high pressure, water began to be made use of also in numbers of small workshops, printing offices, and the like. Altogether, the system answered so well and was so popular with the small industries that when new waterworks were installed by the municipality on a larger scale in 1882–86, for utilizing 5,400 horse-power, the hydraulic system was maintained. The result was that cheap motive power, readily available in each house, saved the Geneva watch and jewelry industry from an otherwise unavoidable death; electric light became cheap, and could be obtained in every private establishment by means of private dynamos. Altogether, the new venture was so successful that the example of Geneva was widely imitated in southern France and Switzerland, and up till now there are engineers who prefer

[36] His wording was very characteristic: "Every one must keep motive power in his storehouse, just as we now keep horses in our stables, in order to accomplish all sorts of work. Reservoirs of motive power may also be established here and there, so that one may come hither with his own vessel and buy *force*, just as we now take water in a public fountain. . . . Force will then become a merchandise."

[37] The system of transmission of power by means of wire ropes was experimented upon on a large scale in Switzerland. No less than 1,500 horse-power obtained from the Rhine at Schaffhausen were distributed in this way, in 1876, to a number of factories, up to a distance of two miles. The same system was adopted at Bellegarde and in Zurich. Here also it was found advantageous to run the transmission ropes at a very high speed.

the hydraulic transmission of power to all others.

IV.

In the hitherto-mentioned cases of transmission of power, mechanical energy was transmitted as such, without transformation. It was taken by means of waterwheels or turbines from a river; it was set to accomplish none but mechanical work—pumping, or compression; and it reached the receiving end of the system without having ceased to be mechanical energy all the time. However, the teachings of Mayer and Séguin, and their followers, Joule, Hirn, Faraday, Grove, Helmholtz and William Thomson, had not been lost. Our generation grew accustomed to the idea that mechanical energy on the one side, and heat, light and electricity on the other side, are but two different modes of motion, which can easily be transformed, the one into the other, and *vice versa*. Consequently, if we intend to transport mechanical energy, we may send it as mechanical force through a system of pipes, or even in bottles in the shape of a compressed gas; but we may also transform it first into a molecular movement—say, electricity—send electricity along wires, and retransform it at the receiving end into mechanical energy, without incurring other losses than those which are due to friction and leakage of all sorts.

A great discovery which was made in the early seventies gave a more concrete shape to this theoretical conception. The means of obtaining an electric current are many; but the easiest way, which became quite familiar for the purposes of electric lighting, was the dynamo machine—a wonderful machine, which from the mere toy it was in our youth has now become one of the most powerful engines of modern industry. Its fundamental principle is very simple. If a coil of insulated wire, which is wound round a cylindrical core of soft iron, or several such coils, are made to rotate between the poles of a horseshoe magnet, electric currents are generated in the coils, and the soft-iron cores become magnets themselves. A certain mechanical force is therefore required to keep the coils rotating: otherwise they would stick to the poles of the magnet; and this mechanical force is transformed into electricity, the amount of which depends upon the size of the machine and the rapidity of rotation of the coils. Thousands and thousands of such machines, driven by steam or water power, are now in use in order to obtain electricity for lighting and all other purposes.

But what would happen with such a machine if, instead of driving it by steam, a strong electric current were launched through it? Would not the machine accomplish the reverse transformation, and give up mechanical work at its other end? Would it not now become a motor? This is what it does in reality, and the discovery of this property of the dynamo machine was considered by the great creator of the theory of electricity, Clerk Maxwell, as the greatest discovery of the age.[28] It has put in our hands a new means for transmitting energy at a distance. The force, let us say, of a waterfall drives a dynamo, which originates an electric current; this current is transmitted by wires to another dynamo of a slightly modified type; and this latter, after having received the electric current, restitutes mechanical power.

A sudden impulse was thus given to the electrical transmission of power, and installations for that purpose began to be made in Europe and America. And yet an almost insuperable obstacle seemed to stand in the way as soon as power had to be transmitted a considerable distance. It was found that the thickness of the trans-

[28] Albemarle, "Electrical Transmission of Power," in *Nineteenth Century*, January, 1892, p. 73. Quite a legend already surrounds the origin of this discovery, which seems to have been made accidentally, by a worker, who coupled two dynamos in the wrong way at the Vienna Exhibition of 1873. It must, however, be said that the idea of the reversibility of the dynamo was previously expressed by both Siemens and W. Hippolyte Fontaine.

mission wire had to be increased in proportion with the distance; so that for sending 200 horse-power a distance of 100 miles a wire one and seven-tenths inch thick—which means nearly 10,000,000 pounds of copper—would have been required.

True, it was known that the thickness of the wire could be reduced by increasing the tension, or pressure, of the electric current. Just as in the transmission of power by means of water or compressed air it was found that the diameter of the pipes could be notably reduced by sending the water, or the air, under high pressure, so it was with electrical wires. A much thinner but well-insulated wire would do with very high-tension currents. Consequently, since 1881 it has been proposed (by Marcel Deprez and Carpentier) to raise the electric pressure before sending electricity along the wire, and to lower down the pressure at the receiving end before distributing electricity in a workshop or in a city. This idea was experimented upon in power transmissions at Munich, at Paris, at Grenoble; but it was also found that with a *direct* current (flowing in one direction), such as was obtained then from the dynamo, the limit of possible pressure was soon reached. When an attempt was made to transmit 200 horse-power through 35 miles of wire one-fifth inch thick under a high tension (of 6,000 volts), the result was a failure.

It required the theoretical work of the Turin professor, Ferraris (in 1885–88), and the inventive and imaginative work of Tesla upon alternate currents to render the electrical transmission of power at a greater distance a possibility, and soon a reality. Such currents, the direction of which is alternately changed with great rapidity, can really be sent under very high pressures without destroying the wires and the motors; but as the driving force is made in such case to fluctuate, two or three alternate currents must be sent to the motor, each of them differing from the others by its phase—that is, attaining its maximal force when the other current is already in decline. The idea of "two-phase" or "polyphase" motors was thus born, and was soon put into practice by Doliwo-Dobrowolski at the Frankfurt Exhibition of 1891. Most of us will probably remember the sensation which was produced at that time, when it became known that 110 horse-power, taken from a waterfall at Lauffen, had been transmitted by means of electricity a distance of 107 miles to Frankfurt; and that the loss of power during the transmission was comparatively small, as it was estimated at from 10 to 35 per cent., while it was known that the loss could not be reduced to that extent under any other system of transmission but electricity. The tension of the current which was used in this case was very great (18,000 volts), but three bare copper wires, each less than one-sixth of an inch thick, supported by poles, like common telegraph wires, and only attached to improved porcelain insulators, perfectly answered the purpose.

The possibility and the advantages of an electric distribution of power were thus fully demonstrated, and the number of establishments based on this principle began now rapidly to multiply. In a list compiled in 1896, and already incomplete, we have eighty-eight transmission plants, by means of which motive power, from 100 to 20,000 horse-power in each establishment (the latter at Montreal, in Canada), is taken from waterfalls or from a central station, transformed into electricity, transmitted as such, and delivered as motive power again at a distance of from 4 to 106 miles.

All these enterprises, including the new one at Geneva, dwindle, however, to very little in comparison with the immense work that has been accomplished for utilizing a small portion of the power of the Niagara. It is known that at the Horseshoe Falls alone no less than 275,000 cubic feet of water drop every second from a height of 165 feet, and that the mechanical power of this tremendous mass of water is equal to the latent power of all the coal that

is mined in the world. A very small portion of this colossal store of energy, namely, 120,000 horse-power, is now being diverted for industrial purposes. This great enterprise has already quite a history, the best part of which is the way in which the Niagara Company appealed to the genius and the experience of physicists and engineers of all nations in order to overcome the many difficulties which stood in the way.[39] The leading idea of the Niagara power works is very plain. An open canal, 250 feet wide, takes from the Niagara River, 1¼ mile above the Falls, a sufficient quantity of water, and brings it to the power-house. There a big pit, 178 feet in depth, was dug out, and immense steel pipes, or penstocks, 7½ feet in diameter, were placed vertically in the pit. The water from the canal, on entering each one of these gigantic pipes, drops down it fully 140 feet, and at the lower end of the pipe it drives a horizontal waterwheel, or turbine, capable of developing a force of 5,125 horse-power. After having accomplished that work the water flows through a slightly inclined tunnel and rejoins the Niagara River, half a mile below the Falls, without spoiling their beauty in the least.

Motive power is thus obtained 140 feet below the floor of the power-house. Now a vertical shaft, 140 feet long, which is itself a triumph of engineering art, is planted in a vertical position on the turbine, and rotates at a very great speed when the turbine is driven at its full force. On this shaft an immense, powerful dynamo is planted, like a mushroom, and is set into a rapid motion by the rotation of the shaft. When it is driven full speed an electric current equivalent to 5,000 horse-power is developed. There is room for ten penstocks in the wheel-pit and for ten dynamos of the same force in the power-house, but only three were installed last summer; the others will be made and placed in proportion as the demand for Niagara power gradually develops.

Each dynamo thus supplies an electric current equivalent to 5,000 horse-power. This current is transmitted to a "switch-board," where, by simply turning certain handles, it can be sent in various directions. It is, however, a low-tension current, and for transmission along wires, especially to distant places, such as Buffalo (twenty-six miles), it must be transformed first into a very high-tension current. This is accomplished in a special transformer-house, where the current enters the "step-up" transformers, and is brought to a high tension (20,000 volts) for long-distance transmission. Then it is sent along wires, either underground when the industrial establishment is close by, or by means of overhead wires placed on strong poles and supported by especially effective porcelain insulators when it has to travel all the distance to Buffalo. On reaching Buffalo the high-tension current is again reduced to a low-tension, and in this shape it is distributed to the street-car companies and factories.

All this seems very plain, and all the plan seems now very rational; but one must read the history of this enterprise to understand how many preliminary schemes had to be considered, and how much thought and skill had to be bestowed upon every part of this machinery. Everything, beginning with the colossal water-pipes or penstocks, and the ways of forging them and placing them in position; the tur-

[39] This history is admirably told, and the works are admirably described, in a profusely illustrated special number of *Cassier's Magazine*, reprinted in a book form, *The Harnessing of Niagara*, New York, 1897. It contains ten articles, in which the history of the enterprise and its present conditions are treated in full. A great number of excellent portraits and photographs of the falls add a great deal to its interest. And yet one must see this wonderful "power-house" and its machines silently producing a transformation of energy to understand the amount of human intelligence and inventiveness that have been put into this colossal enterprise. Being one of those who have had the good fortune of visiting this great workshop of mechanical power, in company with the members of the British Association, I feel bound to express my warm thanks to the American engineers for all the kindness with which they explained to us that simple and yet so complicated arrangement.

bines and the shafts, and the fine arrangements for supporting their immense weights by means of water pressure; and finally the dynamos, the transformers, and the motors—everything had to be worked out almost entirely anew, owing to the novelty and the scale of the enterprise. Only the combined efforts of engineers of all nations could overcome the thousand difficulties which barred the way.[40]

Time alone will tell whether the enterprise is a commercial success, but from the scientific and engineering point of view it is undoubtedly a decided success. Already now 5,000 horse-power are supplied to Buffalo, while 13,425 horse-power are delivered to aluminium, carborundum, calcium carbide (for obtaining acetylene gas), chlorate of potash, soda ash and other electro-chemical works, as well as for local railways and local lighting. Quite a number of new metallurgical and chemical industries, requiring powerful electric currents for obtaining metals or chemicals, are growing near the Niagara power-house; and there can be no doubt that, in proportion as electric motors are better and better constructed for driving all sorts of machinery, the power derived from the Niagara Falls will be still more widely used for driving machinery in the industrial city of Buffalo, and very probably in many other cities as well.

It is also evident that if a notable success be made in the modes of construction and the efficiency of secondary batteries, or accumulators of electricity, the Niagara power-house will at once become the chief supplier of that stored energy. To have energy stored in a box is evidently the desideratum of the moment, because then the accumulator would really supersede coal in many respects, and become as easily transportable and as easily subdivided as coal is, while for all sorts of autocars light and powerful accumulators would be simply invaluable.

The success achieved at the Niagara Falls evidently gave a powerful impulse to similar establishments everywhere. In Switzerland alone similar works are now in course of construction at Basel, in the Val de Travers, at Soleure, and near Langenthal for bringing a force of nearly 20,000 horse-power into the service of industry; while 6,300 horse-power obtained from the two Lutschines (the rivers which water the valleys of Lauterbrunnen and Grindelwald) will soon be utilized for a railway leading to the top of the Jungfrau. As to Geneva, the new big waterworks which are being built on the Rhône will have their power transmitted and distributed now by means of electricity.

Next to Switzerland, one may study the most striking effects of electrical transmission of power from waterfalls in the French department of the Jura. Numbers of small industries which seemed to be doomed to decay have been suddenly recalled to life by cheap motive power supplied to the houses in the small village, while a number of quite new industries, such as the polishing of diamonds, stone-cutting, the making of pipes and combs, and so on, were entirely born anew when the power of small waterfalls began to be distributed in the villages by means of electrical transformers. In the United States and Canada scores of establishments, big and small, for the transmission of power borrowed from waterfalls are now built. Many of the electrical tramways of the American towns borrow their motive power from the force of running water; while in Canada every year brings some new waterfall into the service of industry. Such is the case with the Lachine Rap-

[40] To show the international character of the enterprise, it will suffice to say that the International Niagara Commission, which examined the plans for this colossal plant and awarded prizes for the best of them, consisted of Lord Kelvin, Dr. Coleman Sellers of Philadelphia, Colonel Turettini of Geneva, Professor Mascart of the Paris Academy, and Professor Cawthorne Unwin of London. The designers of the turbines were MM. Jaeseh and Piccard of Geneva, and the deviser of the dynamos was Professor George Forbes of London; while America, on her side, supplied quite a phalanx of brilliant engineers, who devised the general plan and the details of that great venture.

ids, which now supply Montreal with electric light and power; as also the Chaudière Falls and the Deschênes Rapids, which supply power to Ottawa. Nay, even the cataracts of the Nile and the Victoria Falls are studied with the intent of utilizing their energy in Egypt and Matabeleland. The dreams of the founders of the mechanical theory of heat and of the indestructibility of energy are thus realized at a speed and on a scale which these philosopher-poets themselves hardly would have been able to foretell.

P. KROPOTKIN.

From Blackwood's Magazine.

THE FAROES.

II.

So far we have dealt with the origin and the character of the Faroemen, with their beliefs and superstitions. Let us now glance at their daily life, their homes and their occupations. Out of a population of about fifteen thousand, between two and three thousand live in Thorshavn. The homes of the rest are scattered round the coast in villages of different sizes up to fifty or sixty households. The conditions of life in the capital differ considerably from those in the villages, for Thorshavn, being a port, has become in its manners a little like the rest of the world. Being in fairly regular communication with Scotland and Denmark, and being on the direct route to Iceland, it is subject during the season to short invasions of British tourists, who do not penetrate into the country.

Its people have learned in some cases that money is valuable, and in others that courtesy to strangers is often unnecessary. They have seen the comparative luxury in which the Danes and a few rich natives can afford to live. Many of them are store-keepers or shop-assistants; they are divided by distinct differences in rank, wealth and occupation. They have many virtues and many amiabilities, but they have lost something of the simplicity and primitive freshness of their country cousins. The town has changed less than they. Even the *Lagthinghuus* is built of wood, and bears on its roof a luxuriant crop of grass; only the *Amtman's* residence and the new schoolhouse in their solid stone ugliness mar the picturesqueness of its irregular streets, bordered by walls on which the tar has faded to many a rich tint of brown and grey, and shaded from the fitful gleams of misty sunshine by the overhanging greenery of the house-tops. In winter-time oil-lamps are set at intervals in the streets, but in autumn so Stygian a gloom is on the town at midnight that its steep flights of steps, narrow passages and precipitous openings on the sea make it a very labyrinth full of pitfalls for the unhappy wanderer. Worse still are the cesspools, approached by passages often wider than the streets themselves. True, this is a British and not a native view of Thorshavn, but even the natives will agree that their capital, while gaining few advantages of what is new, has lost many of what is old.

Far more interesting than Thorshavn, with its half-ordinary life, is the real Faroe, where the latest improvement in machinery is the *Scotsrock*, a primitive form of spinning-wheel, said to have come from Scotland fifty or a hundred years ago; and where the *bismar* and the whale-oil lamp are to be found in every cottage. Here the women may still be seen grinding their corn in the hand-quern, and pounding the tormentilla-roots with a water-worn stone. To see this region a traveller must visit a village in the country.

To go to any village in the Faroes means a journey. Distances even in the same island are far greater than their measurement in miles would imply to the stranger, for the only road in the group is a mile and a half long, and ends in a sea of mud half-way up a steep incline. Cairns set up at regular intervals of about sixty yards over the hills mark where the tracks should

be; but as there is no means of distinguishing between one set of cairns and another (or between cairns proper and village boundary-stones), and as the routes to different places often cross, it would be hard to find one's way by their help alone, even when the whole country is not buried in a fog that makes a sheep indistinguishable from a heap of stones at a very short distance. In a fog even a native frequently loses himself, and fatal accidents from falls over precipices are not unknown. There are plenty of ponies running half wild on the hills, but they are never ridden as they would be in Iceland. They are reserved for exportation, and for carrying down the winter supply of peat from the higher ground to the villages. The sea is the Faroeman's highway, which leads equally from island to island and from village to village when all dwellings are on the coast. So well recognized is this that the law enables a traveller to continue his journey by sea at any time on a week-day and after noon on Sunday. In each village the *Amtman* appoints a *skütshaffer*. The *skütshaffer* undertakes, for a commission, to supply a boat and eight oarsmen, to be paid at a fixed rate per mile, the hire of the boat being the same as that of one man. No one can decline the office; but as it is generally considered to entail more trouble than it is worth, owing to the difficulty of getting together a crew at certain seasons of the year, leave to retire is always granted after a short tenure. Two years ago a small steamer was built by the government, to visit the different villages and collect passengers and goods for Thorshavn, regularly but at long intervals. At first it was a great success; but now that the novelty has somewhat worn off, although the Sunday excursions from the capital are still popular, the country-people grumble at the fares. "Which is very foolish," the reformer mentioned above once remarked to me. "The fare on the 'Smyril' from Kvivig to Thorshavn is two kröne; but if a man walks he wears out a pair of ox-hide shoes—which also cost two kröne—and has all the trouble of walking as well."

The difficulty of travelling will explain why the life which the villagers lead is so remote from that of the present day; and the best idea of their life is to be gained from a description of a typical village. Kvivig, the village chosen here, is distant from Thorshavn some fourteen to eighteen miles by land. (The exact distance no one knows, for time and space are things which vary much in the Faroes. Indeed I have known the former to differ by over two hours in villages only three miles apart; sun-time and clock-time need not be the same.)

Built in a break of the high basalt cliffs, the village lies scattered on both banks of a stream, which rushes from the hill-top close behind. Close in on three sides there are hills, on the fourth a narrow sound; and then, across the sound, more hills on the island of Vaagoe. A few miles to the south Mount Skelling, one of the highest mountains in the Faroes, towers from the sea to the height of nearly three thousand feet, and yet farther on the islet of Kolter, with its single cone-shaped hill, rises green on the water.

Perhaps the time when the strange northern beauty of the scene strikes the foreigner most is when he sees it from the hills above late on an August evening, after a day's wandering in the fog. The time of sunset is drawing near, and still all things are hidden below in the dense white mist, when in an instant the whiteness parts, reveals the landscape with all its colors brightened and its outlines blurred, and then rolls off, leaving fragments of itself, here wreathing the stony crown of Skelling, there floating along the surface of the sea, over the hills of Vaagoe and over the base of Kolter. Above, the sky is grey, but away in the distance the dying sunlight sparkles on islands and on water, tinging the mist fragments with a deepening pink, as it sets, and lightening the green summit of many a rocky, black headland. The hills all round re-echo with the cries of the curlews and the plovers, and the

terns, fearing for their still unfledged young on the rocks below, screech as they wheel round the intruder's head. Sloping down towards the village on either side are the crofts of the villagers, surrounded with a common wall, and drained and divided by little trenches, in which gigantic king-cups grow. On all sides yellowing patches of short-strawed barley contrast finely with green potato-tops and new-mown hay; while here and there is a plot where the bloom on the still uncut grass shines purple through the moisture.

Beneath lies the village, its gloom only brightened by the green grass on its house-tops and by a single blaze of color, the pastor's garden glorious with yellow flag-flowers, which are a rare exotic at Kvivig. Close by the beach of broken rocks are the long, low boat-sheds of stone and of turf; then comes the church, with its strange little white steeple rising conspicuous from its grassy roof; and then a mass of fifty small black-and-white two-storied cottages, each with its walls covered with rows of drying fish, floats for the nets, and strips of whale-meat, and each with at least one "dry-house" beside it, as it were a skeleton of itself. Farther up still, where the stream becomes a series of small cascades, stand several of the old-fashioned upright water-mills, which have lasted side by side with the hand-quern ever since the days of the Vikings.

The serious work of the day—the fishing and the haymaking—is over, but still there is much to be done. Beside the stream women are busy stacking the drying codfish, and covering them in for the night. Down the slopes come the milkmaids. They are the only barefooted people in the islands, for they find the cows by testing the heat of the dung with their toes. Their full wooden pails are slung on their backs, and they knit and sing together merrily as they return from the higher pastures. The corn has all been ground; but the last load of hay for the night has still to be brought in, and men, who seem like moving hay-stacks, walk slowly through the village, carrying it to the "dry-houses" piled up in wooden creels on their backs. Here and there an old man sits at his cottage door mending his rakes or fitting the short, straight blade of his scythe to its long wooden handle. The village carpenter has finished his day's work on the boat which he is building, and is carrying in what remains of the wood and of the woolen yarn with which he caulks the seams. Perhaps a man may be seen in some corner chopping up a hard black mass with an axe. The mass is dried whale's flesh, and he will boil it down for his cow to eat, for he has been too busy all day in the hay-field to take her beyond the wall to pasture. Behind little walls, built half of stones and half of whales' skulls, huge black caldrons of fish-oil, each presided over by a woman or a child, are steaming on fires of peat or of fresh whales' bones. On the shore some men and boys, who have been out to catch saith or to shoot a few puffins for their evening meal, are dragging up their long, narrow boat over rollers of whales' ribs. Round the houses, or, where they dare, in the steep hay-fields, the children are romping; the younger amongst them dragging about the bones from the whales' backs like toy carts, though carts are things which they have never seen. On some patch that is already mown the older ones play at a game called "sheep-dogs," which may have originated from (or given origin to) the game of cricket, although the bat is but a plank of wood, and the ball a ring of sheep's horns fitting into one another. As they play many of them are eating pieces of dried fish or stalks of the angelica plant, which grows in an enclosure, planted no one knows when or by whom, behind one of the two village shops—shops in which many things Scottish and Danish can be bought, but nothing of native work, except a few woolen jerseys too rough for the natives to wear, which may be sold to some chance sailor from abroad.

A village so built and ordered may be insanitary (for, alas! the headman probably neglects his duty): all of its many

odors are not sweet. Fish-offal floats in the stream and encumbers the narrow space between the houses, but fresh air and ignorance of microbes work wonders; as also do the poultry, which act as scavengers, and so become fat and tasty. Nor does the filth penetrate inside the houses. There everything, if plain, is clean. Men and women alike take off the wooden clogs that they wear over their shoes out of doors, and leave them on a mat outside the kitchen, which is the real entrance to the house. The housewife's chief objection to an English lodger is that he will insist on wearing nails in his boots, which mark her carefully scrubbed deal floors.

Wealth and poverty, rank and difference of trade, have no place in the village. There is land enough and to spare for everybody, and any man, by a few years' fishing off the coast of Iceland, can make sufficient money to marry on, and to buy the three essentials for setting up house-keeping—a cow, a boat and the materials for a house. The seas all round swarm with a life sufficient to afford sustenance to any one who is willing to work; but the land is too poor to bring forth great fortunes, even for the most industrious or the most cunning; consequently the people have remained equals to this day. Indeed, their equality is almost the first thing that strikes a stranger. In Thorshavn and in Thrangisvaag there are rich men and poor men, but elsewhere there are neither. The *kongsbondin*, it is true, whose land has been in his family for generations, is richer than the young man who has just returned from the fishing in Iceland; but the difference is not great. The *bondin's* house is larger than the fisherman's, but not better built or more luxuriously furnished; perhaps the former has several dozen people under his roof every night, while the latter has but two. Both men, moreover, are on an almost equal social standing, for neither is a boor, though the one may have been educated abroad, and the other, quite likely, has never entered a school in his life. It would be a mistake to say that many of the people are really ignorant. It is true that comparatively few of them can read their own dialect; but the majority can read and write Danish. Many also can speak foreign languages, and still more can read them. On Kollefjord in Stromoe there lives a man who has never been out of the Faroes, but can speak excellent English, and can read German, French and Icelandic, besides Danish. He has learned all of them in the winter evenings, that he may read their literatures; but he finds it hard to understand what a level plain can be like, and his one unfulfilled desire is to see a real diamond. Such men are by no means uncommon in the Faroes. Again, it is true that every village has its carpenter and its smith; but every man can build his house and put together the wooden furniture inside, can forge his knives and whale-spears, and is a fisherman, a whaler, an agriculturist, a shepherd, a tanner, a shoemaker, and, if he lives near a "bird-mountain," a bird-catcher also. Perhaps he may be in addition to this a skilful inlayer of knife-handles and sheaths, for, although totally without good tools or technical education, many of the Faroemen show a decided talent for artistic design and execution in this direction.

Not the men only are thus versatile. As in the primitive Aryan household, the daughters are the milkmaids; but every matron can spin on the wheel if not with the spindle, can knit, and weave on the handloom, knows how to cure the stock-fish, to dye the wool, either with aniline dyes—"horrible poisons from abroad"—or with home-made decoctions of lichen, white clover or other plants. A more arduous operation than any of these, but one which she must perform, is the grinding of the tormentilla-root, with the powder of which she tans sheepskin leather for shoes. These shoes she makes herself, and knits their woolen strings; but the thicker oxhide *skegvar* to be worn on the hills are her husband's work.

Already the word whale has cropped

up again and again, but not more often than the Faroeman would think its due. The whale supplies both himself, his dog and his cow with a large proportion of their winter food; it provides him with fuel, with oil for his rude rush-wick lamp, with floats for his nets, with toys for his children, with strings (the sinews), and with many other useful articles. More than this, it is to him as the fox is to the fox-hunter. Whaling is his national sport. The whale that he hunts is not the great whalebone whale, but a smaller toothed kind, called in English the pilot whale, from its habit of swimming about in large schools, each of which follows a leader. In the Faroes it is called the *grind* or gate whale, because the old Norsemen used to trap the schools in enclosures provided with gates, which could be shut and so prevent escape. Nowadays when the *grind* are sighted great excitement prevails throughout the islands, for the news spreads with extraordinary rapidity. All the little boys go about shouting, "*Grindqval, grindqval!*" at the pitch of their voices; and boats set off from every village to join in the hunt. When the whales are reached, a consultation is held and some suitable bay is decided on for the kill; then the boats, getting between them and the open sea, commence to drive them gradually towards the goal. In every boat one man stands upright, holding a lance with which he pricks the backs of the *grind*, and all the oarsmen help to terrify them with their shouts. As the bay is neared the prey is pressed harder and harder, the shouts rise louder and louder, and the lancers prod faster and faster, until at last it is reached. All along the beach the women and children watch in silence; even a dog's bark may now cause the whales to turn and break through the line of their pursuers. Then the leader, mad with terror and pain, makes a rush for the shore, and is stranded. The rest of the school follow him to destruction. The lancers step out of the boats on to the backs of those whales nearest them, and deal them their death-blow by severing the spinal cord at the neck and destroying the brain with a knife made for the purpose. Meanwhile the *syssîman* has arrived, and sets about his duty. First he measures the dead whales, which have been dragged up out of the way of the tide by huge iron hooks thrown into their flesh, and puts aside one-tenth of the total length of the school. Of this a third is his fee, a third belongs to the State, and a third to the Church. Of the nine-tenths that remains he divides a certain proportion among the inhabitants of his district—men, women and children—according to a census which he must take every year for the purpose. The rest he distributes equally to all the boatmen from other districts who have arrived before the last whale was dead. It is illegal to use harpoons with movable heads in hunting the *grind*, doubtless for fear of selfish appropriation.

The whalebone whales are now chased in the Faroes also, but in a more orthodox fashion—with a steamer and a harpoon-gun. A certain Norwegian connected with one of the lighthouses on Osteroe has started a small whaling-station on Stromoe, and is said to have made his fortune by it; but this matters little to the mass of the Faroe people.

In the old days seals were hunted—despite their being, according to a legend, Pharaoh's host—at night in the caves, and were used for much the same purposes as the *grind*. But there are few seals left to hunt since a price was put on their heads some years ago by the *Lagthing*, in the hope that their destruction would encourage Englishmen to visit the islands by improving the sea-trout fishing. Indeed, more walruses than seals are killed now, though the former are but chance visitors carried from their proper home on icebergs.

Seafowl-catching is only second in importance to the *grindvad*. Puffins, fulmars, guillemots, cormorants and shearwaters are all eaten at some stage of their existence, but puffins more than any of the others. During the season on Naalsoe or Myggenaes as

many as four hundred of these birds are often caught by a skilled fowler in a single day. At the end of June and beginning of July, when the young birds are hatched, but still remain unfledged in the burrows, the parents spend their morning out at sea, fishing for themselves and their offspring. About noon they begin to fly home, each with a row of small sprats or anchovies in its beak. At this time of day the fowler seats himself in a suitable spot behind a roughly built wall or a jutting rock on the cliff's edge. Resting before him he holds a pole some twelve feet long, on to the end of which a small triangular net is fixed. With this he catches the puffins as they fly over his head. Their flight is so feeble that they cannot start from the ground without launching themselves from the edge of a precipice; nor can they rise from the sea unless they first gain impetus by striking the water with their wings again and again. On a foggy day, with the wind blowing inshore, they are quite at the mercy of the man with the net. The puffins' breasts are salted and consumed in great numbers during winter, and their feathers form, next to stock-fish, the most important export of the islands. The other birds are either shot or taken from the nest, as their flight is much more powerful than that of the puffin. Quantities of guillemots' and razorbills' eggs are also collected in early summer, especially on the Great Diamond (Störe Dimon), a desolate island occupied by a single family and shut off from all communication for the greater part of the year. The bird-nesters are let down over the edge of the cliffs on horse-hair ropes, which are twisted on a complicated piece of wooden machinery needing three men to work it, and hardly doing the work of one. In Myggenaes during nesting-time similar ropes are stretched across chasms instead of bridges.

The conditions and methods of the fisheries do not differ materially from those prevalent elsewhere, so let us leave them alone, only noticing that cod, saith, halibut and catfish are the commonest fish, and pass on from wild animals to tame. All the villages swarm with poultry. Enough has been said of them already. Sheep, cattle and goats are abundant. The cattle and goats need no special description, except that all the cows are said to suffer from tuberculosis. (The Faroeman refuses to keep pigs, not that he considers them unclean, as he always apologizes to the Englishman for not providing "pig" for breakfast with the eggs, and generally manages to procure some of that dainty if the guest stays for any time. But he says that he is afraid of trichinosis, though it seems strange that he should ever have heard of such a disease.) The sheep deserve more notice, if only because they gave the islands their name (*För*, sheep; *oe*, isle); but it is hardly fair to include them among tame animals. They are shaggy and piebald, and they live mostly on the tops of the mountains, only coming down in winter to feed on seaweed, and on the grass which grows on the house-tops of the villages. The hay is reserved for the winter fodder of the cows, goats and ponies. The sheep are gathered regularly three times in the year: in early spring, that they may be plucked alive, for shears are unknown; in July or August, that the lambs may have the mark of the village put upon them; in October, that those wanted for food may be separated and killed. The want of trained sheep-dogs makes gathering a difficult and dangerous occupation, especially in a fog, since each sheep has to be caught separately, and precipices are everywhere. All the young men in the village turn out to help on these three occasions, and also in winter during heavy snowstorms to drive the flock into turf enclosures on the hills. The wool is distinctly separable into two layers, the outer coarse and the inner fine. The former is twisted into thread with the aid of the spindle, and the latter is made into yarn on the spinning-wheel. The mutton is usually hung in the "dry-house" until it acquires a horn-like consistency. Sheep, as a rule, do not belong to individuals;

but the number that a man is allowed to kill from the village flock is in proportion to the amount of land which he owns. The number of cows and ponies that he may keep is regulated in the same way. As it is considered very mean for any one to keep fewer cows than he is entitled to, the father of a small family has often more milk than he can use. The surplus is given away to poorer neighbors, as no one would think of buying milk, and as the cheese and butter which the women make are not good enough for exportation.

The tenure and purchase of land is a very complicated matter in the Faroes. The *kongsbonde* hold crown-land, for which they pay a small annual rent. The land, however, cannot be taken from them, and descends from father to son. Each village has a large extent of common pasture-ground on the neighboring hills; but the land immediately round the houses belongs to individual villagers. Every plot inside the wall goes with a certain number of marks outside, but the man who buys the requisite amount outside cannot choose the position of his plot inside, but must be contented with any that the seller gives him. Owing to this system, some men have as many as twenty little patches of ground all near together, but all separated from one another, and each not more than a few yards square. Naturally this hinders agriculture; but as the absence of sunshine and the violence of the wind prevent anything but a few potatoes and a little barley from being cultivated, perhaps it does not very much matter. Neither trees nor bushes grow naturally in the islands, and even in a garden they do not attain any height. Currants are the only fruit that will ripen, and they often fail.

In the summer months the time is pretty well occupied with fishing, whaling, fowling and hay-making. It is only during winter that the people have leisure for amusement. Dreary though the weather must then be, it gives the men, if not the women, a rest from labor. Then it is that their want of energy appears, for having nothing better to do, they while away the day smoking and talking in the shops, while their wives sit spinning at home. In the evenings there is often a ball in the house of some *bondin*, at which men and women dance together, and join in providing the music with their own voices. The melodies and the ballads which are set to them are old and pretty, but at a dance they are howled rather than sung, which takes away the charm. Indeed, to a stranger the Farish dance seems singularly devoid of beauty or pleasure. Some dozen men open the ball by joining hands in a circle and slowly stepping round and round, now and then at irregular intervals indulging in a few little kicks, and shouting out a rhyme about "Kaisarin Karl Magnus" or some other hero of olden times. After a while others join the circle (men and women indiscriminately), all quite solemnly, and the dance proceeds until the dancers have hardly room to move. Sometimes the ballad is changed, but the steps and the little kicks appear to go on for ever—at least, they last until the stranger leaves the festive scene.

Another amusement, which is considered especially fitted for marriage-feasts, does not appear so meaningless. When all are seated at table, a large dish containing a lamb's tail is brought in and set down before one of the company. The individual so favored must improvise a couplet suitable to the occasion, and then pass the dish on. As the tail goes round the board every one has a chance of exhibiting his own skill and of admiring that of his neighbors. Sometimes a travelling company of Danish actors visits Thorshavn in winter, and plays there to admiring audiences. Sometimes also amateur theatricals are got up among the Danes or the richer natives. Once at least a play was written by a Faroeman in his own dialect, and acted by his friends in the Danish club-house; but this disgusted the Danes. Theatricals in any form are an amusement not to be enjoyed except in Thorshavn.

Life cannot be ideal when every vil-

lage is a quagmire with the soaking fog and the spray blown up from the sea; when the imprisoned air explodes with loud cannonading in the cliffs all round the coast, and everything is dark and damp and gloomy. But even then the native, accustomed to such weather, manages to enjoy himself with the help of an occasional dance. No one ever gets married in summer. This, at any rate, looks as though winter was considered a fit time for merriment if nor nothing else. And then, although the nights are long, there are times when the aurora makes midnight as light as day, and the islanders come out to watch the *Nordlicht*, and to listen until they seem to hear it whizzing across the sky.

People who have spent the day in Thorshavn on their way to Iceland are fond of comparing the isles to a less magnificent Norway. There is truth in what they say, but not the whole truth. The mountains of Faroe are not so high as those of Norway; but the mists, which clothe their bareness without concealing their rugged outlines, make them appear as high. The sea-cliffs of Vaagoe and of Myggenaes are at least as grand as anything on the Norwegian fjords. One thing, moreover, can rarely be found in the Norway of to-day—an old-world air. This is a novelty at the end of the nineteenth century, because it is but little mingled—the older Faroemen say ruined—with what is new.

JOHN SPLENDID.[1]

THE TALE OF A POOR GENTLEMAN AND THE LITTLE WARS OF LORN.

BY NEIL MUNRO.

CHAPTER XXIX.

THE RETURN.

We got a cold welcome from the women of our own clan and country. They had been very warm and flattering as we passed north—the best they had was not good enough for us; now they eyed us askance as we went among them in the morning. Glenurchy at its foot was wailing with one loud, unceasing coronach made up of many lamentations, for no poor croft, no keep, no steading in all the countryside almost, but had lost its man at Inverlochy. It was terrible to hear those sounds and see those sights of frantic women setting every thought of life aside to give themselves wholly to the epitaphs for the men who would come no more.

For ordinary our women keen but when they are up in years and without the flowers of the cheek that the salt tear renders ugly; women who have had good practice with grief, who are so far off from the fore-world of childhood where heaven is about the dubs of the door that they find something of a dismal pleasure in making wails for a penny or two or a cogie of soldier's brose. They would as soon be weeping as singing; have you not seen them hurrying to the hut to coronach upon a corpse, with the eager step of girls going to the last dance of the harvest? Beldames, witches, I hate your dirges, that are but an old custom of lamentation! But Glenurchy and Lochow today depended for their sorrow upon no hired mourners, upon no aged play-actors at the passion of grief; cherry-cheeked maidens wept as copiously as their grand-dames, and so this universal coronach that rose and fell on the wind round by Stronmealachan and Inishtrynich, and even out upon the little isles that snuggle in the shadow of Cruachan Ben, had many an unaccustomed note; many a cry of anguish from the deepest well of sorrow came to the ear. To walk by a lake and hear grief's chant upon neighboring isles is the chief of the Hundred Dolours. Of itself it was enough to make us melancholy and bitter, but it was worse to see in the faces of old women and men, who passed us surly on the road, the grudge that we had been spared, we gentlemen in the relics of fine garments, while their own lads had been taken. It was half envy that we, and not their own, still lived, and half

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anger that we had been useless in preventing the slaughter of their kinsmen. As we walked in their averted or surly looks, we had no heart to resent them, for was it not human nature? Even when a very old crooked man with a beard like the foam of the linn, and eyes worn deep in their black sockets by constant staring upon care, and through the black mystery of life, stood at his door among his wailing daughters, and added to his rhyming a scurrilous verse whereof we were the subjects, we did no more than hurry our pace.

By the irony of nature it was a day bright and sunny; the *londubh* parted his beak of gold and warbled flutey from the grove, indifferent to all this sorrow of the human world. Only in far-up gashes of the hills was there any remnant of the snow we had seen cover the country like a cloak but a few days before. The crows moved briskly about in the trees of Cladich, and in roupy voices said it might be February of the full dykes but surely winter was over and gone. Lucky birds! they were sure enough of their meals among the soft soil that now followed the frost in the fields and gardens; but the cotters, when their new grief was weary, would find it hard to secure a dinner in all the country once so well provided with herds and hunters, now reft of both.

I was sick of this most doleful expedition; M'Iver was no less, but he mingled his pity for the wretches about us with a shrewd care for the first chance of helping some of them. It came to him unexpectedly in a dark corner of the way through Cladich wood, where a yeld hind lay with a broken leg at the foot of a creag or rock upon which it must have stumbled. Up he hurried, and despatched and gralloched it with his *sgiandubh* in a twinkling, and then he ran back to a cot where women and children half craved us as we passed, and took some of them up to this lucky find and divided the spoil. It was a thin beast, a prey no doubt to the inclement weather, with ivy and acorn, its last meal, still in its paunch.

It was not, however, till we had got down Glenaora as far as Carnus that we found either kindness or conversation. In that pleasant huddle of small cot-houses, the Macarthurs, aye a dour and buoyant race, were making up their homes again as fast as they could, inspired by the old philosophy that if an inscrutable God should level a poor man's dwelling with the dust of the valley, he should even take the stroke with calmness and start to the building again. So the Macarthurs, some of them back from their fight before Antrim and Athole, were throng bearing stone from the river and turf from the brae, and setting up those homes of the poor, that have this advantage over the somes of the wealthy, that they are so easily replaced. In this same Carnus, in later years, I have made a meal that showed curiously the resource of its people. Hunting one day, I went to a little cot-house there and asked for something to eat. A field of unreaped barley stood ripe and dry before the door. Out the housewife went and cut some straws of it, while her daughter shook cream in a bottle, chanting a churn-charm the while. The straw was burned to dry the grain, the breeze win'd it, the quern ground it, the fire cooked the bannocks of it. Then a cow was milked, a couple of eggs were found in the loft, and I sat down in a marvellously short space of time to bread and butter, milk, eggs and a little drop of spirits that was the only ready-made provand in the house. And though now they were divided between the making of coronachs and the building of their homes, they had still the art to pick a dinner, as it were, off the lichened stone.

There was one they called Niall Mor a Chamais (Big Neil of Kames), who in his day won the applause of courts by slaying the Italian bully who bragged Scotland for power of thew, and I liked Niall Mor's word to us as we proceeded on our way to Inneraora.

"Don't think," said he, "that MacCailein's beat yet, or that the boar's tusks are reaped from his jaw. I am of an older clan than Campbell, and closer on Diarmaid than Argile him-

self; but we are all under the one banner now, and I'll tell you two gentlemen something. They may tear Castle Inneraora out at the roots, stable their horses in the yard of Kilmalieu, and tread real Argile in the clay, but we'll be even with them yet. I have an arm here" (and he held up a bloody-looking limb, hashed at Inverlochy); "I'll build my home when this is mended, and I'll challenge MacDonald till my mouth is gagged with the clod."

"And they tell me your son is dead yonder," I said, pitying the old man who had now no wife nor child.

"So they tell me," said he; "that's the will of God, and better a fast death on the field than a decline on the feather-bed. I'll be weeping for my boy when I have bigged my house again and paid a call to some of his enemies."

Nial Mor's philosophy was very much that of all the people of the glen, such of them as were left. They busily built their homes and pondered, as they wrought, on the score to pay.

"That's just like me," M'Iver would say after speeches like that of Niall Mor. He was ever one who found of a sudden all another person's traits in his own bosom when their existence was first manifested to him. "That's just like me myself; we are a beaten clan (in a fashion), but we have our chief and many a thousand swords to the fore yet. I declare to you I am quite cheery thinking we will be coming back again to those glens and mounts we have found so cruel because of our loneliness, and giving the MacDonalds and the rest of the duddy crew the sword in a double dose."

"Ay, John," said I, "it's easy for you to be light-hearted in the matter. You may readily build your bachelor's house at Barbreck, and I may set up again the barn at Elrigmore; but where husband or son is gone it's a different story. For love is a passion stronger than hate. Are you not wondering that those good folk on either hand of us should not be so stricken that they would be sitting in ashes, weeping like Rachel?"

"We are a different stuff from the lady you mention," he said; "I am aye thinking the Almighty put us into this land of rocks and holds, and scalloped coast, cold, hunger and the chase, just to keep ourselves warm by quarreling with each other. If we had not the recreation now and then of a bit splore with the sword, we should be lazily rotting to decay. The world's well divided after all, and the happiness as well as the dule of it. It is because I have never had the pleasure of wife nor child I am a little better off to-day than the weeping folks about me, and they manage to make up their share of content with reflections upon the sweetness of revenge. There was never a man so poor and miserable in this world yet but he had his share of it, even if he had to seek it in the bottle. Amn't I rather clever to think of it now? Have you heard of the idea in your classes?"

"It is a notion very antique," I confessed, to his annoyance; "but it is always to your credit to have thought it out for yourself. It is a notion discredited here and there by people of judgment, but a very comfortable delusion (if it is one) for such as are well off, and would salve their consciences against the miseries of the poor and distressed. And perhaps, after all, you and the wise man of old are right; the lowest state—even the swineherd's—may have as many compensations as that of his master the earl. It is only sin, as my father would say, that keeps the soul in a welter——"

"Does it indeed?" said John, lightly; "the merriest men ever I met were rogues. I've had some vices myself in foreign countries, though I aye had the grace never to mention them, and I ken I ought to be stewing with remorse for them, but am I?"

"Are you?" I asked.

"If you put it so straight, I'll say No—save at my best, and my best is my rarest. But come, come, we are not going into Inneraora on a debate-parade; let us change the subject. Do you know I'm like a boy with a sweet-cake in this entrance to our native

place. I would like not to gulp down the experience all at once like a glutton, but to nibble round the edges of it. We'll take the highway by the shoulder of Creag Dubh, and let the loch slip into our view."

I readily enough fell in with a plan that took us a bit off our way, for I was in glow of eagerness and apprehension. My passion to come home was as great as on the night I rode up from Skipness after my seven years of war, even greater perhaps, for I was returning to a home now full of more problems than then. The restitution of my father's house was to be set about, six months of hard stint were perhaps to be faced by my people, and, above all, I had to find out how it stood between a certain lady and me.

Coming this way from Lochow, the traveller will get his first sight of the waters of Loch Finne by standing on a stone that lies upon a little knowe above his lordship's stables. It is a spot, they say, Argile himself had a keen relish for, and after a day of chasing the deer among the hills and woods, sometimes would he come and stand there and look with satisfaction on his country. For he could see the fat, rich fields of his policies there, and the tumultuous sea that swarms with fish, and to his left he could witness Glenaora and all the piled-up numerous mountains that are full of story if not of crop. To this little knowe M'Iver and I made our way. I would have rushed on it with a boy's impetuousness, but he stopped me with a hand on the sleeve.

"Canny, canny," said he, "let us get the very best of it. There's a cloud on the sun that'll make Finne as cold, flat and dead as lead; wait till it passes."

We waited but a second or two, and then the sun shot out above us, and we stepped on the hillock and we looked, with our bonnets in our hands.

Loch Finne stretched out before us, a spread of twinkling silver waves that searched into the curves of a myriad bays; it was dotted with skiffs. And the yellow light of the early year gilded the remotest hills of Ardno and Ben Ime, and the Old Man Mountain lifted his ancient, rimy chin, still merrily defiant, to the sky. The parks had a greener hue than any we had seen to the north; the town revealed but its higher chimneys and the gable of the kirk, still its smoke told of occupation; the castle frowned as of old, and over all rose Dunchuach.

"O Dunchuach! Dunchuach!" cried M'Iver, in an ecstasy, spreading out his arms, and I thought of the old war-worn Greeks who came with weary marches to their native seas.

"Dunchuach! Dunchuach!" he said; "far have I wandered, and many a town I've seen, and many a prospect that was fine, and I have made songs to maids and mountains, and foreign castles too, but never a verse to Dunchuach. I do not know the words, but at my heart is lilting the very tune, and the spirit of it is here at my breast."

Then the apple rose in his throat, and he turned him round about that I might not guess the tear was at his eye.

"Tuts," said I, broken, "'tis at my own; I feel like a girl."

"Just a tickling at the pap o' the hass," he said in English; and then we both laughed.

It was the afternoon when we got into the town. The street was in the great confusion of a fair-day, crowded with burgesses and landward tenants, men and women from all parts of the countryside still on their way back from flight, or gathered for news of Inverlochy from the survivors, of whom we were the last to arrive. Tradesmen from the Lowlands were busy fitting shops and houses with doors and windows, or filling up the gaps made by fire in the long lands, for MacCailein's first thought on his return from Edinburgh had been the comfort of the common people. Seamen clamored at the quay, loud-spoken mariners from the ports of Greenock and Dunbarton, and their busses tugged at anchor in the upper bay or sat shoulder to shoulder in a friendly congregation under the breast-wall, laden to the beams with merchandise and provender for this hungry country. If Inneraora had

been keening for the lost of Inverlochy, it had got over it; at least we found no public lamentation such as made our traverse on Lochow-side so dreary. Rather there was something eager and rapt about the comportment of the people. They talked little of what was over and bye with, except to curse our Lowland troops, whose unacquaintance with native war had lost us Inverlochy. The women went about their business, red-eyed, wan, silent, for the most part; the men mortgaged the future, and drowned care in debauchery in the alehouses. A town all out of its ordinary, tapsilteerie. Walking in it, I was beat to imagine clearly what it had been like in its placid day of peace. I could never think of it as ever again to be free from this most tawdry aspect of war, a community in good order, with the day moving from dawn to dusk with douce steps, and no sharp agony at the public breast.

But we had no excuse for lingering long over our first entrance upon its blue flagstone pavements; our first duty was to report ourselves in person to our commander, whose return to Inneraora Castle we had been apprised of at Cladich.

Chapter XXX.

Argile's Bedroom.

This need for waiting upon his lordship so soon after the great reverse was a sour bit to swallow, for M'Iver as well as myself. M'Iver, had he his own way of it, would have met his chief and cousin alone; and he gave a hint delicately of that kind, affecting to be interested only in sparing me the trouble and helping me home to Elrigmore, where my father and his men had returned three days before. But I knew an officer's duty too well for that, and insisted on accompanying him, certain (with some mischievous humor in spoiling his fair speeches) that he dared scarcely be so fair-faced and flattering to MacCailein before me as he would be alone with him.

The castle had the stillness of the grave. Every guest had fled as quickly as he could from this retreat of a naked and ashamed soul. Where pipers played as a custom, and laughter rang, there was the melancholy hush of a monastery. The servants went about a-tiptoe, speaking in whispers lest their master should be irritated in his fever; the very banner on the tower hung limp about its pole, hiding the black galley of its blazon, now a lymphad of disgrace. As we went over the bridge a little dog, his lordship's favorite, lying at the door, weary, no doubt, of sullen looks and silence, came leaping and barking about us at John's cheery invitation, in a joy, as it would appear, to meet any one with a spark of life and friendliness.

Argile was in his bed-chamber and between blankets, in the hands of his physician, who had been bleeding him. He had a minister for mind and body, for Gordon was with him too, and stayed with him during our visit, though the chirurgeon left the room with a word of caution to his patient not to excite himself.

"Wise advice, is it not, gentlemen?" said the marquis. "As if one stirred up his own passions like a dame waiting on a drunken husband. I am glad to see you back, more especially as Master Gordon was just telling me of the surprise at Dalness, and the chance that you had been cut down there by the MacDonalds, who, luckily for him and Sonachan and the others, all followed in your flight, and gave them a chance of an easy escape."

He shook hands with us warmly enough, with fingers moist and nervous. A raised look was in his visage, his hair hung upon a brow of exceeding pallor. I realized at a half-glance the commotion that was within.

"A drop of wine?"

"Thank you," said I, "but I'm after a glass in the town." I was yet to learn sorrow for this unhappy nobleman whose conduct had bittered me all the way from Lorn.

MacCailein scrutinized me sharply, and opened his lips as it were to say something, but changed his mind, and made a gesture towards the bottle, which John Splendid speedily availed

himself of with a "Here's one who has no swither about it. Lord knows I've had few enough of life's comforts this past week!"

Gordon sat with a Bible in his hand, abstracted, his eyes staring on a window that looked on the branches of the highest tree about the castle. He had been reading or praying with his master before the physician had come in; he had been doing his duty (I could swear by his stern jaw), and making MacCailein Mor writhe to the flame of a conscience revived. There was a constraint on the company for some minutes, on no one more than Argile, who sat propped up on his bolsters, and, fiddling with long, thin fingers with the fringes of his coverlet, looked every way but in the eyes of M'Iver or myself. I can swear John was glad enough to escape their glance. He was as little at ease as his master, made all the fuss he could with his bottle, and drank his wine with far too great a deliberation for a person generally pretty brisk with the beaker.

"It's a fine day," said he at last, breaking tne silence. "The back of the winter's broken fairly." Then he started and looked at me, conscious that I might have some contempt for so frail an opening.

"Did you come here to speak about the weather?" asked MacCailein, with a sour, wearied smile.

"No," said M'Iver, ruffling up at once; "I came to ask when you are going to take us back the road we came?"

"To—to—overbye?" asked MacCailein, balking at the name.

"Just so; to Inverlochy," answered M'Iver. "I suppose we are to give them a call when we can muster enough men?"

"Hadn't we better consider where we are first?" said MacCailein. Then he put his fair hand through his ruddy locks and sighed. "Have you nothing to say (and be done with it) about my—my—my part in the affair? His reverence here has had his will of me on that score."

M'Iver darted a look of annoyance at the minister, who seemed to pay no heed, but still to have his thoughts far off.

"I have really nothing to say, your lordship, except that I'm glad to see you spared to us here instead of being left a corpse with our honest old kinsman Auchinbreac (*beannachd leas!*) and more gentry of your clan and house than the Blue Quarry will make tombs for in Kilmalieu. If the minister has been preaching, it's his trade; it's what you pay him for. I'm no homilist, thank God, and no man's conscience."

"No, no; God knows you are not," said Argile, in a tone of pity and vexation. "I think I said before that you were the poorest of consciences to a man is a hesitancy between duty and inclination. . . . And all my guests have left me, John; I'm a lonely man in my castle of Inneraora this day, except for the prayers of a wife—God bless and keep her!—who knows and comprehends my spirit. And I have one more friend here in this room——"

"You can count on John M'Iver to the yetts of Hell," said my friend, "and I am the proud man that you should think it."

"I am obliged to you for that, kinsman," said his lordship in Gaelic, with a by-your-leave to the cleric. "But do not give your witless vanity a foolish airing before my chaplain." Then he added in the English, "When the fairy was at my cradle-side and gave my mother choice of my gifts, I wish she had chosen rowth of real friends. I could be doing with more about me of the quality I mention; better than horse and foot would they be, more trusty than the claymores of my clan. It might be the slogan 'Cruachan' whenever it wist, and Archibald of Argile would be more puissant than he of Homer's story. People have envied me when they have heard me called the King of the Highlands—fools that did not know I was the poorest, weakest man of his time, surrounded by flatterers instead of friends. Gordon, Gordon, I am the victim of the Highland liar, that smooth-tongued——"

"Call it the Campbell liar," I cried

bitterly, thinking of my father. "Your clan has not the reputation of guile for nothing, and if you refused straightforward, honest outside counsel sometimes, it was not for the want of its offering."

"I cry your pardon," said M'Callein, meekly; "I should have learned to discriminate by now. Blood's thicker than water, they say, but it's not so pure and transparent; I have found my blood drumly enough."

"And ready enough to run freely for you," said M'Iver, but half comprehending this perplexed mind. "Your lordship should be the last to echo any sentiment directed against the name and fame of Clan Campbell."

"Indeed they gave me their blood freely enough—a thousand of them lying yonder in the north—I wish they had been so lavish, those closest about me, with truth and honor. For that I must depend on an honest servant of the Lord Jesus Christ, the one man in my pay with the courage to confront me with no cloaked speech, but his naked thought, though it would lash me like whips. Oh, many a time my wife, who is none of our race, warned me against the softening influence, the blight and rot of this eternal air of flattery that's round about Castle Inneraora like a swamp vapor. She's in Stirling to-day—I ken it in my heart that to-night she'll weep upon her pillow because she'll know fate has found the weak link in her goodman's armor again."

John Splendid's brow came down upon a most perplexed face; this seemed all beyond him, but he knew his master was somehow blaming the world at large for his own error.

"Come now, John," said his lordship, turning and leaning on his arm and looking curiously at his kinsman. "Come now, what do you think of me here without a wound but at the heart, with Auchinbreac and all my gallant fellows yonder?"

"Auchinbreac was a soldier by trade and a good one too," answered M'Iver, at his usual trick of prevarication.

"And a flatterer like yourself, you mean," said his lordship. "He and you learned the lesson in the same school, I'm thinking. And as ill luck had it, his ill counsel found me on the swither, as yours did when Colkitto came down the glens there to rape and burn. That's the Devil for you; he's aye planning to have the minute and the man together. Come, sir, come, sir; what do you think, what do you think?"

He rose as he spoke and put his knees below him, and leaned across the bed with hands upon the blankets, staring at his kinsman in the face as if he would pluck the truth from him out at the very eyes. His voice rose to an animal cry with an agony in it; the sinister look that did him such injustice breathed across his visage. His knuckle and collar-bones shone blae through the tight skin.

"What do I think?" echoed M'Iver. "Well, now——"

"On your honor now," cried Argile, clawing him by the shoulder.

At that M'Iver's countenance changed; he threw off his soft complacence, and cruelty and temper stiffened his jaw.

"I'll soon give you that, my Lord of Argile," said he. "I can lie like a Dutch major for convenience sake, but put me on honor and you'll get the truth if it cost me my life. Purgatory's your portion, Argile, for a Sunday's work that makes our name a mock to-day across the envious world. Take to your books and your preachers, sir—you're for the cloister and not for the field; and if I live a hundred years, I'll deny I went with you to Inverlochy. I left my sword in Badenoch, but here's my dagger" (and he threw it with a clatter on the floor); "it's the last tool I'll handle in the service of a scholar. To-morrow the old big wars for me; Hebron's troopers will welcome an umquhil comrade, and I'll find no swithering captains among the cavaliers in France."

Back set my lord in bed, and laughed with a surrender shrill and distraught, until Master Gordon and I calmed him, and there was his cousin

still before him in a passion, standing in the middle of the floor.

"Stop, stop, John," he cried; "now that for once I've got the truth from you, let us be better friends than ever before."

"Never the same again," said M'Iver, firmly, "never the same again, for you ken my estimate of you now; and what avails my courtesy?"

"Your flatteries, you mean," said Argile, good-natured. "And, besides, you speak only of my two blunders; you know my other parts—you know that by nature I am no poltroon."

"That's no credit for you, sir—it's the strong blood of Diarmaid; there was no poltroon in the race but what came in on the wrong side of the blanket. I've said it first, and I'll say it to the last, your spirit is smoored among the books. Paper and ink will be the Gael's undoing; my mother taught me, and my mother knew: so long as we live by our hands we were the world's invincibles. Rome met us and Rome tried us, and her corps might come in winter torrents, but they never tore us from our hills and keeps. What Rome may never do, that may paper and sheepskin; you, yourself, MacCailein, have the name of plying pen and ink very well to your own purpose in the fingers of old lairds who have small skill of that contrivance."

He would have passed on in this outrageous strain without remission, had not Gordon checked him with a determined and unabashed voice. He told him to sit down in silence or leave the room, and asked him to look upon his master and see if that high fever was a condition to inflame in a fit of temper. John Splendid cooled a little, and went to the window, looking down with eyes of far surmise upon the pleasance and the town below, chewing his temper between his teeth.

"You see, Elrigmore, what a happy King of the Highlands I am," said the marquis, despondently. "Fortunate Auchinbreac, to be all by with it after a moment's agony!"

"He died like a good soldier, sir," I said; "he was by all accounts a man of some vices, but he wiped them out in his own blood."

"Are you sure of that? Is it not the old folly of the code of honor, the mad exaltation of mere valor in arms, that makes you think so? What if he was spilling his drops on the wrong side? He was against his king at least, and —oh, my wits, my wits, what am I saying? . . . I saw you did not drink my wine, Elrigmore; am I so low as that?"

"There is no man so low, my lord," said I, "but he may be yet exalted. We are, the best of us, the instruments of a whimsical providence" ("What a rank doctrine," muttered the minister), "and Cæsar himself was sometimes craven before his portents. You, my lord, have the one consolation left, that all's not bye yet with the cause you champion, and you may yet lead it to the highest victory"

Argile took a grateful glance at me. "You know what I am," he said, "not a man of the happy, single mood like our friend Barbreck here, but tossed between philosophies. I am paying bitterly for my pliability, for who so much the sport of life as the man who knows right well the gait he should gang, and prays fervently to be permitted to follow it, but sometimes stumbles in the ditch? Monday, oh Monday; I must be at Edinburgh and face them all! 'Tis that dauntons me." His eyes seemed to swim in blood, as he looked at me, or through me, aghast at the horror of his situation, and sweat stood in blobs upon his brow. "That," he went on, "weighs me down like lead. Here about me my people know me, and may palliate the mistake of a day by the recollection of a life-time's honor. I blame Auchinbreac; I blame the chieftains—they said I must take to the galley; I blame——"

"Blame no one, Argile," said Master Gordon, standing up before him, not a second too soon, for he had his hand on the dirk M'Iver had thrown down. Then he turned to us with ejecting arms. "Out you go," he cried sternly,

"out you go; what delight have you in seeing a nobleman on the rack?"

As the door closed behind us we could hear Argile sob.

Seventeen years later, if I may quit the thread of my history and take in a piece that more properly belongs to the later adventures of John Splendid, I saw my lord die by the maiden. Being then in his tail, I dined with him and his friends the day before he died, and he spoke with exceeding cheerfulness of that hour M'Iver and I found him in bed in Inneraora. "You saw me at my worst," said he, "on two occasions; bide till to-morrow and you'll see me at my best. I never unmasked to mortal man till that day Gordon put you out of my room." I stayed and saw him die; I saw his head up and his chin in the air as behoved his quality, that day he went through that noisy, crowded, causied Edinburgh—Edinburgh of the doleful memories, Edinburgh whose ports I never enter till this day but I feel a tickling at the nape of my neck, as where a wooden collar should lie before the shear fall.

"A cool enough reception this," said M'Iver, as we left the gate. "It was different last year, when we went up together on your return from Low Germanie. Then MacCailein was in the need of soldiers, now he's in the need of priests, who gloze over his weakness with their prayers."

"You are hardly fair either to the one or the other," I said. "Argile, whom I went in to meet to-day with a poor regard for him, turns out a better man than I gave him credit for being; he has at least the grace to grieve about a great error of judgment, or weakness of the spirit, whichever it may be. And as for Master Gordon, I'll take off my hat to him. Yon's no type of the sour, dour, antiprelatics; he comes closer on the perfect man and soldier than any man I ever met."

M'Iver looked at me with a sign of injured vanity.

"You're not very fastidious in your choice of comparisons," said he. "As for myself, I cannot see much more in Gordon than what he is paid for—a habit of even temper, more truthfulness than I have myself, and that's a dubious virtue, for see the impoliteness that's always in its train! Add to that a lack of any clannish regard for MacCailein Mor, whom he treats just like a common merchant, and that's all. Just a plain, stout, fozy, sappy burrow-man, keeping a gospel shop, with scarcely so much of a man's parts as will let him fend a blow in the face. I could march four miles for his one, and learn him the A B *ab* of every manly art."

"I like you fine, man," I cried; "I would sooner go tramping the glens with you any day than Master Gordon; but that's a weakness of the imperfect and carnal man, that cares not to have a conscience at his coat-tail every hour of the day; you have your own parts and he his, and his parts are those that are not very common on our side of the country—more's the pity."

M'Iver was too busy for a time upon the sudden rupture with Argile to pay very much heed to my defence of Master Gordon. The quarrel—to call that a quarrel in which one man had all the bad temper and the other nothing but self-reproach—had soured him of a sudden as thunder turns the morning's cream to curd before noon. And his whole demeanor revealed a totally new man. In his ordinary, John was very pernicketty about his clothing, always with the most shining of buckles and buttons, always trim in plaiding, snod and spruce about his hair and his hosen, a real dandy who never overdid the part, but just contrived to be pleasant to the eye of women, who, in my observation, have, the most sensible of them, as great a contempt for the mere fop as they have for the sloven. It took, indeed, trimness of apparel to make up for the plainness of his face. Not that he was ugly or harsh-favored—he was too genial for either; he was simply well-favored enough to pass in a fair, as the saying goes, which is a midway between Apollo and plain Donald. But what with a jacket and vest all creased for

the most apparent reasons, a plaid frayed to ribbons in dashing through the wood of Dalness, brogues burst at the toes, and a bonnet soaked all out of semblance to itself by rains, he appeared more common. The black temper of him transformed his face too; it lost the geniality that was its main charm, and out of his eyes flamed a most wicked, cunning, cruel fellow.

He went down the way from the castle brig to the arches cursing with great eloquence. A soldier picks up many tricks of blasphemy in a career about the world with foreign legions, and John had the reddings of three or four languages at his command, so that he had no need to repeat himself much in his choice of terms about his chief. To do him justice, he had plenty of condemnation for himself too.

"Well," said I, "you were inclined to be calm enough with MacCallein when first we entered his room. I suppose all this uproar is over his charge of flattery, not against yourself alone but against all the people about."

"That's just the thing," he cried, turning round and throwing his arms furiously about. "Could he not have charged the clan generally, and let who would put the cap on? If yon's the policy of courts, heaven help princes!"

"And yet you were very smug when you entered," I protested.

"Was I that?" he retorted. "That's easy to account for. Did you ever feel like arguing with a gentleman when you had on your second-best clothes and no ruffle? The man was in his bed, and his position as he cocked up there on his knees was not the most dignified I have seen; but even then he had the best of it, for I felt like a beggar before him in my shabby duds. Oh, he had the best of us all there. You saw Gordon had the sense to put on a new surtout and clean linen and a freshly dressed peruke before he saw him; I think he would scarcely have been so bold before Argile if he had his breek-bands a finger-length below his belt, and his wig on the nape of his neck as we saw him in Glencoe."

"Anyhow," said I, "you have cut the connections; are you really going abroad?"

He paused a second in thought, smiled a little, and then laughed as if he had seen something humorous.

"Man," said he, "didn't I do the dirk trick with a fine touch of nobility? Maybe you thought it was done on the impulse and without any calculation. The truth was, I played the whole thing over in my mind while he was in the preliminaries of his discourse. I saw he was working up to an attack, and I knew I could surprise him. But I must confess I said more than I intended. When I spoke of the big wars and Hebron's troopers—well, Argile's a very nice shire to be living in."

"What, was it all play-acting then?"

He looked at me and shrugged his shoulders.

"You must be a singularly simple man, Elrigmore," he said, "to ask that of any one. Are we not play-acting half our lives, once we get a little beyond the stage of the ploughman and the herd? Half our tears and half our laughter and the great bulk of our virtues are like your way of cocking your bonnet over your right ear; it does not come by nature, and it is done to pleasure the world in general. Play-acting! I'll tell you this, Colin, I could scarcely say myself when a passion of mine is real or fancied now. But I can tell you this too: if I began in play to revile the marquis, I ended in earnest. I'm afraid it's all bye with me yonder. No more mine-managing for me; I struck too close on the marrow for him to forget it."

"He has forgotten and forgiven it already," I cried. "At least, let us hope he has not forgotten it (for you said no more than was perhaps deserved), but at least it's forgiven. If you said to-morrow that you were sorry for your temper——"

"Said ten thousand fiends in Hell!" cried M'Iver. "I may be vexed I an-

gered the man; but I'll never let him know it by my words, if he cannot make it out from my acts."

Chapter XXXI.

Mistress Betty.

I dressed myself up in the morning with scrupulous care, put my hair in a queue, shaved cheek and chin, and put at my shoulder the old heirloom brooch of the house, which, with some other property, the invaders had not found below the *bruach* where we had hid it on the day we had left Elrigmore to their mercy. I was all in a tremor of expectation, hot and cold by turns in hope and apprehension, but always with a singular uplifting at the heart, because for good or ill I was sure to meet in the next hour or two the one person whose presence in Inneraora made it the finest town in the world.

Some men tell me they have felt the experience more than once; light o' loves they, errant gallants, I'll swear (my dear) the tingle of it came to me but once at the thought of meeting one woman. Had she been absent from Inneraora that morning I would have avoided it like a leper-house because of its gloomy memorials; but the very reek of its repairing tenements as I saw them from the upper windows of my home floating in a haze against the blue over the shoulder of Dun Torvil seemed to call me on. I went about the empty chambers carolling like a bird. Aumrie and clothespress were burst and vacant, the rooms in all details were bereft and cheerless because of the plenishing stolen, and my father sat among his losses and mourned, but I made light of our spoiling.

As if to heighten the rapture of my mood, the day was full of sunshine, and though the woods crowding the upper glen were leafless and slumbering, they were touched to something like autumn's gold. Some people love the country but in the time of leafage; I find it laden with delights in every season of the year, and the end of winter as cheery a period as any, for I know that the buds are pressing at the bark, and that the boughs in rumors of wind stretch out like the arms of the sleeper who will soon be full awake.

Down I went stepping to a merry lilt, banishing every fear from my thoughts, and the first call I made was on the provost. He was over in Askaig's with his wife and family pending the repair of his own house, and Askaig was off to his estate. Master Brown sat on the balusters of the outer stair, dangling his squat legs and studying through horn specs the tale of thig and theft which the town officer had made up a report on. As I put my foot on the bottom step he looked up, and his welcome was most friendly.

"Colin! Colin!" he cried, hastening down to shake me by the hand, "come your ways in. I heard you got home yesterday, and I was sure you would give us a call in the by-going to-day. And you're little the waur of your jaunt—hale and hearty. We ken all about your prisoning; M'Iver was in last night and kept the crack going till morning—a most humorous devil."

He pinched rapee as he spoke in rapid doses from a snuff-box, and spread the brown powder in extravagant carelessness over his vest. He might affect what light-heartedness he could; I saw that the past fortnight had made a difference for the worse on him. The pouches below the eyes had got heavier and darker, the lines had deepened on his brow, the ruddy polish had gone off his cheek, and it was dull and spotted; by ten o'clock at night—when he used to be very jovial over a glass—I could tell he would be hagged and yawning. At his years men begin to age in a few hours; a sudden wrench to the affections, or shock to a long-disciplined order of things in their lives, will send them staggering down off the braehead whereon they have been perched with a good balance so long that they themselves have forgot the natural course of human man is to be progressing somewhere.

"Ah, lad, lad! haven't we the times?" he said, as he led me within to the parlor. "Inneraora in the stour in her reputation as well as in her tenements. I wish the one could be amended as readily as the other; but we mustn't be saying a word against princes, ye ken," he went on in the discreet whisper of the conspirator. "You were up and saw him last night, I'm hearing. To-day they tell me he's himself again, and coming down to a session meeting at noon. I must put myself in his way to say a friendly word or two. Ah! you're laughing at us. I understand, man, I understand. You travellers need not practise the art of civility; but we're too close on the castle here to be out of favor with MacCailein Mor. Draw in your chair, and—Mary, Mary, goodwife! bring in the bottle with you and see young Elrigmore."

In came the goodwife with even greater signs of trouble than her husband, but all in a flurry of good-humored welcome. They sat, the pair of them, before me in a little room poorly lit by a narrow window but half-glazed, because a lower portion of it had been destroyed in the occupation of the Irish, and had to be timbered up to keep the wind outside. A douce pathetic pair; I let my thoughts stray a little even from their daughter as I looked on them, and pondered on the tragedy of age that is almost as cruel as war, but for the love that set Provost Brown with his chair haffit close against his wife's, so that less noticeably he might take her hand in his below the table and renew the glow that first they learned, no doubt, when lad and lass awandering in summer days, oh long ago, in Eas-a-chosain glen.

They plied me with a hundred questions, of my adventures, and of my father, and of affairs up in Shira Glen. I sat answering very often at hazard, with my mind fixed on the one question I had to ask, which was a simple one as to the whereabouts and condition of their daughter. But I leave to any lad of a shrinking and sensitive nature if this was not a task of exceeding difficulty. For you must remember that here were two very sharp-eyed parents, one of them with a gift of irony discomposing to a lover, and the other, or both perhaps, with no reason, so far as I knew, to think I had any special feeling for the girl. But I knew, as well as if I had gone over the thing a score of times before, how my manner of putting that simple question would reveal me at a flash to the irony of the father and the wonder of the mother. And in any case they gave me not the smallest chance of putting it. As they plied me with affairs a thousand miles beyond the limits of my immediate interest, and I answered them with a brevity almost discourteous, I was practising two or three phrases in my mind.

"And how is your daughter, sir?" might seem simple enough, but it would be too cold for an inquirer to whom hitherto she had always been Betty; while to ask for Betty outright would—a startling new spring of delicacy in my nature told me—be to use a friendly warmth only the most cordial relations with the girl would warrant. No matter how I mooted the lady, I knew something in my voice and the very flush in my face would reveal my secret. My position grew more pitiful every moment, for to the charge of cowardice I levelled first at myself for my backwardness, there was the charge of discourtesy. What could they think of my breeding that I had not mentioned their daughter? What could I think from their silence regarding her but that they were vexed at my indifference to her, and with the usual Highland pride were determined not even to mention her name till she was asked for. Upon my word, I was in a trouble more distressing than when I sat in the mist in the Moor of Rannoch and confessed myself lost! I thought for a little, in a momentary wave of courage, of leading the conversation in her direction by harking back to the day when the town was abandoned, and she took

flight with the child into the woods. Still the provost, now doing all the talking, while his wife knit hose, would ever turn a hundred by-ways from the main road I sought to lead him on.

By and by, when the crack had drifted hopelessly away from all connection with Mistress Betty, there was a woman's step on the stair. My face became as hot as fire at the sound, and I leaned eagerly forward in my chair before I thought of the transparency of the movement.

The provost's eyes closed to little slits in his face; the corner of his mouth curled in amusement.

"Here's Peggy back from Bailie Campbell's," he said to his wife, and I was convinced he did so to let me know the new-comer, who was now moving about in the kitchen across the lobby, was not the one I had expected. My disappointment must have shown in my face; I felt I was wasting moments the most precious, though it was something to be under the same roof as my lady's relatives, under the same roof as she had slept below last night, and to see some of her actual self, almost, in the smiles and eyes and turns of the voice of her mother. I stood up to go, slyly casting an eye about the chamber for the poor comfort of seeing so little as a ribbon or a shoe that was hers, but even that was denied me. The provost, who, I'll swear now, knew my trouble from the outset, though his wife was blind to it, felt at last constrained to relieve it.

"And you must be going," he said; "I wish you could have waited to see Betty, who's on a visit to Carlunnan and should be home by now."

As he said it, he was tapping his snuff-mull and looking at me pawkily out of the corners of his eyes, that hovered between me and his wife, who stood with the wool in her hand, beaming mildly up in my face. I half turned on my heel and set a restless gaze on the corner of the room. For many considerations were in his simple words. That he should say them at all relieved the tension of my wonder; that he should say them in the way he did was, in a manner, a manifestation that he guessed the real state of my feelings to the lady whose very name I had not dared to mention to him, and that he was ready to favor any suit I pressed. I was even inclined to push my reading of his remark further, and say to myself that if he had not known the lady herself favored me, he would never have fanned my hope by even so little as an indifferent sentence.

"And how is she—how is Betty?" I asked, lamely.

He laughed with a pleasing slyness, and gave me a dunt with his elbow on the side, a bit of the faun, a bit of the father, a bit of my father's friend.

"You're too blate, Colin," he said, and then put his arm through his wife's and gave her a squeeze to take her into his joke. I would have laughed at the humor of it but for the surprise in the good woman's face. It fair startled me, and yet it was no more than the look of a woman who learns that her man and she have been close company with a secret for months, and she had never made its acquaintance. There was perhaps a little more, a hesitancy in the utterance, a flush, a tone that seemed to show the subject was one to be passed bye as fast as possible.

She smiled feebly a little, picked up a row of dropped stitches, and "Oh, Betty," said she, "Betty—is—is—she'll be back in a little. Will you not wait?"

"No, I must be going," I said; "I may have the happiness of meeting her before I go up the glen in the afternoon."

They pressed me both to stay, but I seemed, in my mind, to have a new demand upon me for an immediate and private meeting with the girl; she must be seen alone, and not in presence of the old couple, who would give my natural shyness in her company far more gawkiness than it might have if I met her alone.

I went out and went down the stair, and along the front of the land, my

being in a tumult, yet with my observation keen to everything, no matter how trivial, that happened around me. The sea-gulls, that make the town the playground of their stormy holidays, swept and curved among the pigeons in the gutter and quarrelled over the spoils; tossed in the air wind-blown, then dropped with feet outstretched upon the black joists and window-sills. Fowls of the midden, new brought from other parts to make up the place of those that had gone to the kail-pots of Antrim and Athole, stalked about with heads high, foreign to this causied and gravelled country, clucking eagerly for meat. I made my way amid the bird of the sea and the bird of the wood and common bird of the yard with a divided mind, seeing them with the eye for future recollection, but seeing them not. Peats were at every close-mouth, at every door almost that was half-habitable, and fuel cut from the wood, and all about the thoroughfare was embarrassed.

I had a different decision at every step, now to seek the girl, now to go home, now finding the most heartening hints in the agitation of the parents, anon troubled exceedingly with the reflection that there was something of an unfavorable nature in the demeanor of her mother, however much the father's badinage might sooth my vanity.

I had made up my mind for the twentieth time to go the length of Carlunnan and face her plump and plain, when behold she came suddenly round the corner at the Maitland where the surviving Lowland troops were gathered! M'Iver was with her, and my resolution shrivelled and shook within me like an old nut kernel. I would have turned but for the stupidity and ill-breeding such a movement would evidence, yet as I held on my way at a slower pace and the pair approached, I felt every limb an encumbrance, I felt the country lout throbbing in every vein.

Betty almost ran to meet me as we came closer together, with an agreeableness that might have pleased me more had I not the certainty that she would have been as warm to either of the two men who had rescued her from her hiding in the wood of Strongara, and had just come back from her country's battles with however small credit to themselves in the result. She was in a very happy mood, for, like all women, she could readily forget the large and general vexation of a reverse to her people in war if the immediate prospect was not unpleasant and things around were showing improvement. Her eyes shone and sparkled, the ordinary sedate flow of her words was varied by little outbursts of gayety. She had been visiting the child at Carlunnan, where it had been adopted by her kinswoman, who made a better guardian than its grandmother, who died on her way to Dunbarton.

"What sets you on this road," she asked blandly.

"Oh, you have often seen me on this road before," I said boldly and with meaning. Ere I went wandering we had heard the rivers sing many a time, and sat upon its banks and little thought life and time were passing as quickly as the leaf or bubble on the surface. She flushed ever so little at the remembrance, and threw a stray curl back from her temples with an impatient toss of her fingers.

"And so much of the dandy, too!" put in M'Iver, himself perjink enough about his apparel. "I'll wager there's a girl in the business." He laughed low, looked from one to the other of us, yet his meaning escaped, or seemed to escape, the lady.

"Elrigmore is none of the kind," she said, as if to protect a child. "He has too many serious affairs of life in hand to be in the humor for gallivanting."

This extraordinary reading of my character by the one woman who ought to have known it better, if only by an instinct, threw me into a blend of confusion and chagrin. I had no answer for her. I regretted now that my evil star had sent me up Glenaora, or that having met her with M'Iver,

whose presence increased my diffidence, I had not pretended some errand or business up among the farm-lands in the Salachry hills, where distant relatives of our house were often found. But now I was on one side of the lady and M'Iver on the other, on our way towards the burgh, and the convoy must be concluded, even if I were dumb all the way. Dumb, indeed, I was inclined to be. M'Iver laughed uproariously at madame's notion that I was too seriously engaged with life for the recreation of love-making; it was bound to please him, coming, as it did, so close on his own estimate of me as the Sobersides he christened me at almost our first acquaintance. But he had a generous enough notion to give me the chance of being alone with the girl he knew very well my feelings for.

"I've been up just now at the camp," he said, "anent the purchase of a troop-horse, and I had not concluded my bargain when Mistress Brown passed. I'm your true *caballero* in one respect, that I must be offering every handsome passenger an escort; but this time it's an office for Elrigmore, who can undertake your company down the way bravely enough, I'll swear, for all his blateness."

Betty halted, as did the other two of us, and bantered my comrade.

"I ask your pardon a thousand times, Barbreck," she said; "I thought you were hurrying on your way down behind me, and came upon me before you saw who I was."

"That was the story," said he, coolly; "I'm too old a hand at the business to be set back on the road I came by a lady who had no relish for my company."

"I would not take you away from your marketing for the world," she proceeded. "Perhaps Elrigmore may be inclined to go up to the camp too; he may help you to the pick of your horse—and we'll believe you the soldier of fortune again when we see you one."

She, at least, had no belief that the mine-manager was to be a mercenary again. She tapped with a tiny toe on the pebbles, affecting a choler the twinkle in her eyes did not homologate. It was enough for M'Iver, who gave a "Pshaw," and concluded he might as well, as he said, "be in good company so long as he had the chance," and down the way again we went. Somehow the check had put him on his mettle. He seemed to lose at once all regard for my interests in this. I became, in truth, more frequently than was palatable, the butt of his little pleasantries; my mysterious saunter up that glen, my sobriety of demeanor, my now silence—all those things, whose meaning he knew very well, were made the text for his amusement for the lady. As for me, I met it all weakly, striving to meet his wit with careless smiles.

For the first time, I was seized with a jealousy of him. Here was I, your arrant rustic; he was as composed as could be, overflowing with happy thoughts, laughable incident, and ever ready with the compliment or the retort women love to hear from a smart fellow of even indifferent character. He had the policy to conceal the vanity that was for ordinary his most transparent feature, and his trick was to admire the valor and the humor of others. Our wanderings in Lorn and Lochaber, our adventures with the MacDonalds, all the story of the expedition, he danced through, as it were, an the tiptoe of light phrase, as if it had been a strong man's scheme of recreation, scarcely once appealing to me. With a flushed cheek and parted lips the lady hung upon his words, arched her dark eyebrows in fear, or bubbled into the merriest laughter as the occasion demanded. Worst of all, she seemed to share his amusement at my silence, and then I could have wished rather than a bag of gold I had the Mull witch's invisible coat, or that the earth would swallow me up. The very country-people passing on the way were art and part in the conspiracy of circumstances to make me unhappy. Their salutes were rarely for Elrigmore, but for the lady and John Splendid, whose bold quarrel

with MacCailein Mor was now the rumor of two parishes, and gave him a wide name for unflinching bravery of a kind he had been generally acknowledged as sadly wanting in before. And Mistress Betty could not but see that, high or low, I was second to this fellow going off—or at least with the rumor of it—to Hebron's cavaliers in France before the week-end.

M'Iver was just, perhaps, carrying his humor at my cost a little too far for my temper, which was never readily stirred, but flamed fast enough when set properly alowe, and Betty—here too your true woman wit—saw it sooner than he did himself, quick enough in the uptake though he was. He had returned again to his banter about the supposititious girl I was trysted with up the glen, and my face showed my annoyance.

"You think all men like yourself," said the girl to him, "and all women the same—like the common soldier you are."

"I think them all darlings," he confessed, laughing; "God bless them, kind and foolish——"

"As you've known them oftenest," she supplied coldly.

"Or sedate and sensible," he went on. "None of them but found John M'Iver of Barbeck their very true cavalier."

"Indeed," said Mistress Betty, colder than ever, some new thought working within her, judging from the tone. "And yet you leave to-morrow, and have never been to Carlunnan." She said the last words with a hesitancy, blushing most warmly. To me they were a dark mystery, unless I was to assume, what I did wildly for a moment, only to relinquish the notion immediately, that she had been in the humor to go visiting her friends with him. M'Iver's face showed some curious emotion that it baffled me to read, and all that was plain to me was that here were two people with a very strong thought of a distressing kind between them.

"It would be idle for me," he said in a little, "to deny that I know what you mean. But do you not believe you might be doing me poor justice in your suspicions?"

"It is a topic I cannot come closer upon," she answered; "I am a woman. That forbids me and that same compels me. If nature does not demand your attendance up there, then you are a man wronged by rumor or a man dead to every sense of the human spirit. I have listened to your humor and laughed at your banter, for you have an art to make people forget; but all the way I have been finding my lightness broken in on by the feeble cry of a child without a mother—it seems, too, without a father."

"If that is the trouble," he said, turning away with a smile he did not succeed in concealing either from the lady or me, "you may set your mind at rest. The child you mention has, from this day, what we may be calling a god-father."

"Then the tale's true?" she said, stopping on the road, turning and gazing with neither mirth nor warmth in her countenance.

M'Iver hesitated, and looked from the woman to me as if I could help him in the difficulty; but I must have seemed a clown in the very abjection of my ignorance of what all this mystery was about. He searched my face and I searched my memory, and then I recollected that he had told me before of Mistress Brown's suspicions of the paternity of the child.

"I could well wish your answer came more readily," said she again, somewhat bitterly, "for then I know it would be denial."

"And perhaps untruth, too," said John, oddly. "This time it's a question of honor, a far more complicated turn of circumstances than you can fancy, and my answer takes time."

"Guilty!" she cried, "and you go like this. You know what the story is, and your whole conduct in front of my charges shows you take the very lightest view of the whole horrible crime."

"Say away, madame," said M'Iver, assuming an indifference his every feature gave the lie to. "I'm no better

nor no worse than the rest of the world. That's all I'll say."

"You have said enough for me, then," said the girl. "I think, Elrigmore, if you please, I'll not trouble you and your friend to come further with me now. I am obliged for your society so far."

She was gone before either of us could answer, leaving us like a pair of culprits standing in the middle of the road. A little breeze fanned her clothing, and they shook behind her as to be free from some contamination. She had overtaken and joined a woman in front of her before I had recovered from my astonishment. M'Iver turned from surveying her departure with lowered eyebrows, and gave me a look with half-a-dozen contending thoughts in it.

"That's the end of it," said he, as much to himself as for my ear, "and the odd thing of it again is that she never seemed so precious fine a woman as when it was 'a' by wi' auld days and you,' as the Scots song says."

"It beats me to fathom," I confessed. "Do I understand that you admitted to the lady that you were the father of the child?"

"I admitted nothing," he said, cunningly, "if you'll take the trouble to think again. I but let the lady have her own way, which most of her sex generally manage from me in the long-run."

"But, man! you could leave her only one impression, that you are as black as she thinks you, and am I not sure you fall far short of that?"

"Thank you," he said; "it is good of you to say it. I am for off whenever my affairs here are settled, and when I'm the breadth of seas afar from Inneraora, you'll think as well as you can of John M'Iver, who'll maybe not grudge having lost the lady's affection if he kept his friend's and comrade's heart."

He was vastly moved as he spoke. He took my hand and wrung it fiercely; he turned without another word, good or ill, and strode back on his way to the camp, leaving me to seek my way to the town alone.

[TO BE CONCLUDED.]

From The Revue de Deux Mondes.

AN ENGLISHMAN ON POLITICAL FRANCE.

Mr. John Edward Courtenay Bodley came to France in May, 1890, and for seven whole years, without intermission or interruption, north, south, east and west, he has traversed our country in all directions. He has just published a work in two volumes,[1] very noteworthy and very much noticed, in which he has recorded the reflections and conclusions which his years of educational travel have suggested to him. Magistrates and professors, small farmers and great landed proprietors, churchmen, merchants, soldiers, thinkers, artists and artisans, Frenchmen of every class and occupation have become known to him. From the beginning he realized that it was not at Paris that we ought to be studied; that he who lives in that delightful city cannot escape the disturbing influence of rival coteries, whose ceaseless excitement is often factitious. He saw that to know France one must know her provinces. His self-imposed task seemed to him anything but unpleasant: he felt that to flit about among our urban and rural scenes would be an occupation full of charm and variety. "Even now," he tells us, "when I know the French provinces as few foreigners can know them, the familiar scenes of daily life which meet the casual view give me pleasurable sensations as keen as when I was a passing stranger. A bishop blessing little children in the aisles of his cathedral, a group of white-coifed women in a market-place, or a red-legged regiment swinging through a village to the strains of a bugle-march, has now for me not merely the sentimental or picturesque interest of former days. I know, indeed, that the lives of many of

[1] France, by J. E. C. Bodley, 2 vols.; London, 1898; Macmillan & Co.

these people are neither ideal nor idyllic, but I recognize now in these provincials, with all their failings, the true force of France, which keeps her in the front rank of nations, in spite of the follies, governmental and other, committed in her beautiful capital."

Whenever he touches upon our private virtues and family customs we cannot fail to be moved by the testimony of this sagacious and kindly onlooker. We should, indeed, be hard to satisfy were we not pleased by what he says. He considers that we are, as a nation, strikingly honorable, and that we might well serve as a model for the solution we have found to the problems of family life and household management; for our habits of industry, spirit of order and miracle-working economy. He considers France to be the country of the whole world where civilization has permeated furthest into the lower layers of society.

He has visited districts where the peasants are really coarse, but more often, he tells us, their rustic air is but a mask, and they surprise the stranger by their real urbanity and charm of manner. "Their stores of household linen, their excellent cooking, the propriety of their attire, though not universal, exist as signs of the force of the French race which resists the disorderliness of its governors. At nightfall the traveller who passes through remote villages sometimes sees through the open cottage door the evening meal neatly laid with a comfort unknown in middle-class households in other civilized lands." Mr. Bodley does not attribute any advantages we may possess over certain of our neighbors to the Revolution, but to our past, our origin, to heredity, old traditions and the acuteness of our race. Are we in no danger of losing those attractive characteristics which make us so civilized a people, those forceful traits which we have displayed on the very morrow of frightful calamities? We are not sufficiently on our guard against certain dangerous enemies who are doing their best to corrupt our natures and poison our minds. Luckily three great corporations exercise over us a healthful influence, and their virtues "counterbalance the ill done by the conspicuous classes whose words and deeds fill the newspapers." These three bodies, in spite of their obvious differences, are alike ruled, with a few individual exceptions, by the sentiment of duty, the spirit of sacrifice, the love of tranquil and honest toil. They are the army, the university and the clergy.

While he shows the fullest appreciation of our virtues, the utmost indulgence for our faults, Mr. Bodley treats our government and our governors with implacable severity, and political France is assuredly not the France which he respects and loves. He only needed to look about him to see that the moral set up and followed by the immense majority of the nation is infinitely superior to that of our politicians, and that in a land where the heads of households are industrious and economical and the matrons without flaw, the governmental housekeeping is full of disorder and confusion.

We have been accused of displaying, in times of crisis, an excitable temperament, given to dangerous explosions, fits of brutality and ferocity, violent and destructive instincts. But in everyday life, says Mr. Bodley, no human beings are so orderly and methodical as the French. "In the private life of the people, their thrift, their care in keeping accounts, their skill in organizing simple pleasures in the intervals of toil, the neat attire of the women, the formality and good service of the meals even in humble homes, all testify to a provident and systematic temperament inconsistent with improvisation. The habit of thought of the French is equally opposed to it. They are wont instinctively to classify and to formulate their ideas, and the educational training of all grades fosters this tendency. An English priest, once attached to the diocese of Paris, told me how impressed he was with the contrast of the confessions in the two countries of young girls before the age when the sacrament is a psychological revelation or a perfunctory routine. The youthful

English penitent told a tale which had neither beginning nor end, tangled and unreflecting. The French child unfolded a calmly prepared theme, a model of lucid symmetry, in which all that had to be said was arranged under precise categories.

The same characteristics, this spirit of order and method brought to bear on the most insignificant details, recur in every official hierarchy, administrative, clerical, military and judicial. These incarnate the spirit of the nation, and their members do their duties as best they can, "side by side with the Parliamentary Republic, of which every President has abdicated save one who was murdered, and under which a minister who retains his portfolio for a year is a curiosity." These hierarchies, on which the national genius has set its mark, bear also the stamp of the extraordinary man who created modern France, whose marvellous power brought order out of the chaos of the Revolution, who was able to reconcile new ideas and hereditary tendencies and pour old wine into new bottles. Napoleon, says Mr. Bodley, "was the greatest master of detail the world has ever seen." The "civil edifice" which he raised in France was built on solid foundations. It has endured through a century of storm and crisis, sound, and showing no signs of age. Why need France have added to these appropriate and beneficial institutions others of English origin which are only adapted to the English? Mr. Bodley has no hatred for a republican form of government. Republic or Constitutional Monarchy is all one to him. Aristotle said that man was a political animal: Mr. Bodley lays down the principle that the Frenchman is not a parliamentary animal, and that we shall never recover our health, never be able to breathe freely, until we get rid of this foreign importation, which to us is absolutely deadly.

When the hero of "Tancred" was starting for the east, Disraeli made him say: "I go to a land that has never been blessed by that fatal drollery called a representative government." Mr. Bodley is convinced that this type of government, whatever its intrinsic worth may be, is feasible in England, but subsides in all other countries into a "fatal drollery."

He gives us a detailed account of one incident in his educational travels, which made upon him an ineffaceable impression. It was during the days of Boulangism, and he was at the time in one of the cities of the South. Going one morning to the finest *café* on the Place de la République, he found assembled there the big-wigs of the municipal council, the doctor at their head—met to discuss the merits of two rival candidates for the Assembly. A "traveller in the produce of Rouen" was present at this debate and took his part in it. He was a good judge in such matters: the capital and the provinces had long held no secrets for him. Had one of the candidates been a "moderate," a government Republican, they would have made short work of his case. It would not then have taken them long to decide that he was not only an idiot but a man of loose morals, of whose past dark tales were told. I myself once knew a would-be deputy, who, in a public meeting, was accused of fratricide because he had not helped his brother when the latter was in difficulties. In vain he called all the powers to witness that he had never had a brother; they ordered him to prove it. It is, unfortunately, very hard to prove that one never had a brother, and to the end of the electoral campaign he was interrupted in his speeches by cries of, "How about your brother? He would be alive now if you had helped him!" It is bad to lose your election: it is still worse to owe your defeat to a brother who never existed!

The case discussed in Mr. Bodley's presence was much more difficult to settle. The rival candidates were both intrepid partisans of Free Thought, and they belonged to the same Masonic Lodge.

One, a veterinary surgeon, expert in his profession, and an unflinching radical, had no admiration for generals who want to be dictators; the other, a radico-socialist, who for ten days had

been a *sous-préfet* under the Commune, had become a convert to Boulangism. The debate was fierce and stormy; the participants grew heated; they screamed and roared; and beads of perspiration gathered fast on the brow of the Parisian from Normandy, whom they had taken as arbiter. Even to him the case was extremely complicated, and for the first time he found it embarrassing to settle the destinies of France.

Leaving the *café*, Mr. Bodley took his way along the Avenue Gambetta, whose white walls were reflecting the rays of a torrid sun. A few minutes later he entered a house, modest but comfortable, "the house and workshop of a wood-carver, whose skill, famed through the region, had long since relieved him of the need for manual toil." There, in a cool, well-ordered apartment, he found tranquil folk bearing no likeness to the tribunes of the coffee-house. "This simple, provincial family," so he says, "composed a characteristic French group, the head of it grown grey in intelligent labor; his wife vigorous and orderly, keeping his books as well as the house; his daughter, as comely as was her mother before the war, lately married to a young cultivator of the neighborhood, also present, who had completed his military service. This room full of contented people contained the materials that promote the prosperity and real glory of France—industry, thrift, family sentiment, artistic instinct, cultivation of the soil, cheerful performance of patriotic duty and collaboration of woman in the plan of life—all impregnated with an air of the old Latin civilization, oftener manifest in humble spheres than in the class which ought longest to have preserved it." When an Englishman is curious he is not curious by halves! Mr. Bodley could not help asking the master of this humble dwelling what he thought about the forthcoming election. The answer made him was one which he was often to hear later: "I keep out of politics, sir." (*Je ne m'occupe pas de politique, monsieur.*) "The members of this worthy family," he adds, "had no ill-will for the Republic, nor indeed for any régime which allowed them to pursue their callings tranquilly; but politics were to them not an occupation for steady and industrious people." He had made a good use of his day; he had seen in a *café* the France that he hates, and in a well-ordered house the France that he loves.

Mr. Bodley is far from showing surprise that there should be in France many people who take no part in politics. He has become convinced, in his many excursions through our provinces, that our country is on the whole very well governed; that a man who likes a tranquil life can find few places of residence equally agreeable; that the many wheels of the great machine turn without unnecessary friction. Moreover, or so he says, all nations have their trials and annoyances, and while the French complain of having too many office-holders to support, the English are eaten up by their lawyers. The real trouble is that this unconcern is manifested by the most healthful elements of the nation, who thus leave a free field to the turbulent, the disingenuous and the intolerant, with whom remains the task of preparing for the elections. Furthermore, as these professional politicians are usually of less than average intellect, it follows that the abilities of a candidate whom they find satisfactory must also be very mediocre. Therefore, he who should judge France by her Parliament would do her an injustice, and so we may conclude that a Parliament is not adapted to her needs.

In drawing his picture of France, Mr. Bodley has not always distinguished certain qualities which are peculiar to us from others which we possess in common with all democratic societies, and in fact, though he does not realize it, Democracy at large is what he has indicted. Let him study Switzerland as he has studied France. There, too, he will find that a large section of the inhabitants pays no heed to politics, but leaves the arena to the turbulent, ambitious and intolerant. Many refuse to vote at all: others perform the wearisome task in a perfunctory fashion, or vote according to their mood of the mo-

ment, without thinking of the consequences. And who is ignorant that the United States is the country where honest men do most absolutely resign their political privileges into the hands of professional politicians who view these merely as a lucrative means of earning a livelihood?

Man is so constituted that he cares but little for rights which are not at the same time privileges, and in any land of universal suffrage it requires considerable virtue to take an active part in public affairs. This is particularly true in an age when clever and ingenious inventions have made life easier and more comfortable, and created habits very unlike the uses and customs of the ancient Romans. Tocqueville noticed that, in rich and prosperous democracies, the love of well-being became a tenacious and exclusive passion, a sort of "tranquil sensuality," which gradually permeates the soul, and replaces everything but the longing to enlarge one's boundaries, plant an orchard, beautify the home, provide against want, procure one's comfort, satisfy fictitious need at little expenditure of strength or money.

"These objects may be petty, but the soul clings to them. Day by day as she dwells on them they loom larger, till at last they conceal from her view all the rest of the world. It is not of inveigling men into forbidden pleasures that I accuse equality," Tocqueville continues, "but of leading them too far in the search of pleasures which are permitted. Thus the ruling power in the world may well come to be a sort of honorable materialism, which will not openly corrupt the soul, but which will quietly disintegrate it and ruin its every spring of action." Blessed are the indifferent! But sooner or later there comes a crisis in public affairs which affects their private interests, and they wake with a start, to wish that they had not slept so long.

One difficulty all our own, unknown alike to the United States and to Switzerland, both federated democracies, is the difficulty of conciliating parliamentary government and administrative and political centralization. Mr. Bodley considers this problem insoluble; it must be admitted that it is very complicated. Thanks to the Revolution and Napoleon I., France is the most unified of all countries, and a centralized government has at its disposal a multitude of small offices whose number tends inevitably to increase. All office-seekers are in its power; it controls them alike by fear and hope, and when so many are the mere creatures of the executive power, elective liberty is often a mere fiction. This was seen during the Second Empire, in the days of official candidates. For many years universal suffrage had no objection to choosing candidates pleasing to a very strong government, since this government had at its disposal many remunerative places with which to reward the ambitious, and assured to the indifferent prosperity in business and a tranquil life.

The same causes do not always produce the same results, and centralization does not necessarily give strength to a government. Under the Empire the executive kept a tight rein on legislative power: in these republican days, though its attributes are not materially diminished, it no longer sins on the side of authority but on that of weakness, and all power lies with the Chambers.

Mr. Bodley rightly considers that this is due to the fact that republican France has been incapable of resolving herself into two great parties, but is, instead, subdivided into countless "groups." Great parties, as Tocqueville said, gather round ideas rather than men; their passions are usually more generous, they have convictions rather than opinions, and are more willing to subordinate private to public interest. Small parties are usually devoid of political faith, and take no pains to dissimulate their egoism. Their enthusiasm is premeditated, and while their language is violent, their course is uncertain. Yet ambition must of necessity create for itself a party, since it is not easy to overthrow him who holds the power, merely by longing to take his place. All a politician's skill, therefore,

centres in the composition of a party; his first task is to see his own interest, and what are the analogous interests which may be grouped about his own. Finally he puts his wits to work to see if, in the length and breadth of the world, some doctrine or principle cannot be discovered, under cover of which the new organization may be free to expand and circulate. It is like that royal license to publish which our fathers used to print on the first page of their books, incorporating it with their own work, though it formed no integral part of it. The truth could not be better expressed, and this is precisely our present condition.

Owing to the absence of great parties, there are in our Chambers no solid and constant majorities on which a government can count. A majority is formed, on the contrary, by ephemeral combinations of turbulent and shifting groups, whose only rule of conduct is often personal interest, and whose ever-varying moods baffle all calculation. When its majority is unstable, a ministry is never sure of the morrow; deprived of sure support, it lives by expedients, and the art of governing becomes, in the hands of its members, the art of prolonging their painful existence. The deputies turn the weakness of the cabinet to their own advantage. They profit by it to worm their way into a thousand matters which have always lain within the province of the executive. They play the rôle of irresponsible governors, and not content with deciding on the make of the great bureaucratic machine, they claim the right of running it themselves. "This confusion between the right of control and the right of action, destructive of parliamentary government, is a symptom of the malady which has constantly afflicted French representatives of the people."[2]

The deputies are become the sovereign dispensers of office and favor; they promise and threaten, give and refuse, nominate and remove. The most influential are powers before whom prefects tremble, showing more anxiety to gain their favor than to please a minister, who to-day has little influence and who to-morrow will have none at all. These influential deputies are sure of re-election; should the support of the prefect fail them they would have on their side the authorities of the cantons and communes, who either owe them their places or count on promotion at their hands. Formerly French officials only thought of obeying orders; now their one preoccupation is to discover who can help or injure them. In 1893 M. Félix Faure, not yet President of the Republic, said to his constituents: "In one department the administrative body supports the Liberal policy; in the next one the Radicals are favored, while in another the Préfet carries out the orders of his Minister, and the sous-Préfets follow a different line. There are many functionaries whom we know of who are much more pre-occupied about giving satisfaction to the government of to-morrow than to the government they represent, and this is a state of anarchy which the country desires to end."

This state of anarchy will last as long as ministries are unstable and deputies omnipotent. It is not only the would-be office-holders who have recourse to their prestige, but every aspirant for a decoration, or a *bureau de tabac*, everyone who needs a "pull," everyone who is in difficulties with government, excise, military authority or that of the law. "Get a recommendation from your deputy; a collection of testimonials is incomplete which does not include one from the candidate's deputy." Wherever he may address himself such is the answer the applicant receives. Who is the deputy most sure of re-election? Who is the deputy who may absolutely count on the support of office-holders, "primaries" and politicians? He who has the faculty of carrying his candidates, whose requests are never "pocketed," whose suggestions are com-

[2] In his posthumous work *Les Finances* M. Leon Say puts this very lucidly in a sentence impossible to translate into technical English: "*Si le controleur supprime le controle pour agir à la place du controlé c'en est fait du gouvernement parlementaire, qui est alors remplacé par le gouvernement du Parlement; ce qui est tout le contraire.*"

mands. One day not long since, when on my way to cast my vote at a second ballot, I fell in with an elector, who asked me to tell him something about the character of the two rival candidates. He displayed no anxiety about their opinions: on the whole, he seemed to think that neither of them had any. The question in his mind was which of the two was the easier to get at, the more amenable, if you had a favor to ask; which the more certain, at need, to get a hearing with the minister. As I listened and answered I thought of Bodley, of the *café* which he once entered, and then of the wood-carver who said to him: "I keep out of politics, sir." The worthy man was wrong: we should all take our part. To-day, he who breaks does not pay.

"France," says Mr. Bodley, is saddled with "two constitutions—the written law of 1875, according to which the executive power is confided to the ministers, who are responsible before the Chambers, and to whom the members of the administrative service are subordinate; the other unwritten, whereby the executive power is exercised at Paris in the bureau of the central departments of the State with the co-operation of members of Parliament, and in the provincial prefectures under the orders of politicians. The pressure brought by legislators upon the transitory ministers of the day, their relations with the permanent officials who advise on the distribution of patronage, the intrigues and solicitations which prelude the nomination to any administrative post, the life of a provincial functionary harassed by his subordination to two sets of masters, his hierarchic chiefs and the unofficial band of local wire-pullers always ready to denounce him to the deputy—all these phases of French political existence are vouched for, not by disappointed reactionaries or violent politicians of the extreme groups, but by the unimpeachable testimony of witnesses whose loyalty to the Republic is as well known as is their moderation."

We are accused of not possessing the "genius of commerce," and yet when it comes to elections and nominations ours is the country where the greatest number of bargains are struck to the mutual advantage of both parties, and where "give and take" is the universal motto. Political France is a great "Society for Mutual Benefit," but the society is somewhat mixed and continually disturbed by the attempts of each member to take more than his rightful share of the blanket. We have too much administration and too little government. We suffer from disorder and lack of cohesion, from what Louis-Philippe used to call "messiness" (*gâchis*).

Those moderate republicans, whose testimony Mr. Bodley invokes, believe that a remedy exists for this unfortunate condition of things. One suggests that voting be made obligatory and the indifferent be thus forced to come out of their apathy; another believes in administrative decentralization; a third in the substitution of great parties for the group system; each has his favorite remedy. Our English author does not believe in the efficacy of these reforms, which, according to him, are not adapted to our temperament. "A prophet would not be considered rash," he tells us, "who foretold that in England twenty years hence the Crown with its attributes will remain unchanged, but that local administration will have undergone serious modifications. On the other hand, in France no one would predict the reform or the abolition of the communal system in that period; while few are confident that the supreme executive power will be then vested in the President of a Parliamentary Republic."

The gist of the advice which he offers us is as follows: "Keep fast hold, Frenchmen, of all you have received from Napoleon I.! That matchless genius understood you so well! He had so clear a perception of your character, temperament, interests and needs! He had taken your measure and built you a suit. Administrative centralization, as he understood it, is exactly what you want—the best possible corrective to the vices of your governmental system. This is so true that a foreigner who

does not read the newspapers might pass years among you, without ever suspecting that you were ill-governed. Rid yourselves once and for all of your parliamentary pseudo-liberties, and all will go well; your happiness will be complete! You take strange notions into your heads from time to time. You have borrowed certain institutions from the English, and you have concluded an alliance with Russia. In both cases you have acted against common sense. You should have allied yourself with England and borrowed of Russia her autocratic régime!"

Mr. Bodley loves us, but he makes more or less fun of us. This sort of liberty may be taken among friends. He knows very well that our needs are not so simple as he pretends, and that our character is more complex; that we soon become restive under a despotic government; that, before re-ascending the throne in 1815, Napoleon I. had to grant us the "Acte additional," and that Napoleon III., after driving us with a tight rein for a time, had, in the end, to lay the reins upon our neck. Mr. Bodley is good enough to consider us one of the most interesting nations on earth; and it annoys him to see us adapting ourselves to a worse than mediocre form of government.

He would spur us up to venturesome innovations. He thinks we were created to astonish the world by audacious and risky experiments and sensational changes of scene. Mr. Bodley is a dangerous friend. It must be admitted that parliamentary democracy has its own vices and disadvantages, like every other régime, but it is yet more certain that the worst of all governments is that which Plato named "dramatocracy." Please God, we will have no more of that, for we have already had quite enough!

Mr. Bodley would incite us to adventures; but he more than suspects that his counsels will be unheeded, and that we are no longer inclined to have recourse to violent measures for the reform of abuses whereby many people live, and which our sages incline to accept with resignation. Has not somebody said that to be happy in spite of gross abuses is the perfection of human wisdom? It begins to seem as though the vast majority of Frenchmen had been converted to conservative principles, and that France is resolved at all hazards to keep what she has got —preferring the bird in her hand to two in the bush. There is no longer any such thing as a political religion in France. Revolutions are schools of skepticism. We have become disgusted with sentimental politics and with showy politics: and a very good thing, too. To go on preaching *chivalry* to us while the nations round about are all absorbed in their own interests is simply asking us to play the game and delight the souls of our enemies. We have become utilitarian. We compare evils and prefer the lesser; we balance advantages and select the cheaper—which are also, in many cases, the most certain.

Our "indifferents" themselves, when they can be got to reflect upon public affairs at all, clearly recognize the fact that the Parliamentary Republic, despite its errors and weaknesses, and the incoherence of its ideas, has done us great and undeniable service; that it has helped us to recuperate from cruel disasters, and once more to cut a tolerable figure before the world. The principle of the indifferentist is not to expect perfection, but to be satisfied with the passable; and his anxieties are calmed and his patience fortified by the steadfastness of certain institutions, which emerge, as somebody has said, like rocks out of shifting sand. Knowing us as he does, Mr. Bodley can understand, better than the average foreigner, the hidden reasons of that passionate attachment which France cherishes for her army. In an age when silver and gold are the popular idols, the army represents magnanimity, self-abnegation and austere living. In a loquacious and lawless society, where subalterns are often in command, it represents authority, order and the pride which can obey and be still. Hands off the army! Whatever happens, it is our

last resource—the one of all our hopes which is least likely to prove delusive.

G. VALBERT.

Translated for The Living Age.

From Longman's Magazine.

THE BROTHERS.

Jacob Addis and his brother Joshua sat one on each side of the roomy ingle in the parlor. The fagot that lay across the dogs in the great open fireplace was unlighted, for after a long spell of drought the August night was stiflingly hot; but the chimney corner was comfortable, and habit was the rule of their lives. Two mugs of cider stood in the little holes in the wall close to their hands, and the smoke from their long pipes made a cloud between them.

They had sat thus, in rarely broken silence, night after night for seven years, ever since their father died. Living in their lonely farm in the uplands, they had little need of words. To housekeeper or farm hands, or to the outer world with which they came in contact on market days, they never spoke where a nod or a sign would do as well; and, between themselves, their long and intimate sympathy had given them the power of reading each other's thoughts. And each believed his brother to be the finest man in the world.

Not a word had been spoken, but it was plain that there was trouble on their minds. Now and then they looked furtively at each other through the smoke-cloud, and crossed or uncrossed their legs in unusual restlessness. Jacob's round, good-humored face was puckered; he looked uncomfortably from his brother to the empty grate, from the grate to the yawning chimney. And the moody, sullen Joshua scowled at the shining dogs.

It was Jacob who made the first effort. For the first time in his life he had acted, in a most serious matter, without taking counsel of his brother, and was naturally nervous in confessing what he had done. Had he known that Joshua, too, had a confession to make, he might have found it easier to speak. He took a long pull at the cider mug, mopped his brow with a great red handkerchief, and looked anxiously round the corner of the ingle to see that the kitchen door was shut.

"Joshua," he said; and though his brother had been expecting him to speak, he started at the sound of his voice; "Joshua, I be thinkin'——"

His nervousness overcame him again, and he stopped.

"Well, Jacob?"

"O' gettin' married, Joshua."

Joshua's handsome eyes brightened in pleasure.

"Eh!" said he, after a long pause, "and who be she, Jacob?"

"Nanny Pinnell o' the 'King's Arms,'" said Jacob, with his eyes on the ground.

Joshua turned to his mug, but as he raised it to his lips the stem of his pipe snapped short in his hand.

"'Ave 'ee asked 'er?" he said.

"Aye."

"And what did she say?"

"She said 'yes.'"

The big clock in the corner began to creak and whirr before striking, and silence fell on the brothers once more.

"Well," said Jacob, when the clock had finished, "what do 'ee say, Joshua?"

"I says—never!" said Joshua, quietly.

"Ah! I was afeard thou would."

He drained his mug and went on.

"The will do say, Joshua, as thou be to 'ave them two rooms in the 'ouse rent-free for thy life, and so much money every year. That be what they do call a first charge on the property. I can't 'urt 'ee, nor turn 'ee out if I would, for all the free'old be mine; and whether I could or no, thou don't suppose as I'd go to do that, Joshua."

He stopped, exhausted with his long speech. Joshua stood up to reach for the matches on a shelf over his head.

"It bain't that," he said, when his pipe was alight.

"What be it, then?"

"She've a-promised me, too," said

Joshua, with his bright, fierce eyes fixed full on Jacob's face.

"What?"

Jacob half stood up in his amazement, and then, as if ashamed of showing so much emotion, sank back on to the settle.

"When were that, then?" he asked, quietly.

"O' Thursday," said Joshua.

"And she promised me o' Friday!"

The brothers glared at each other across the ingle.

"It can't be true," said Jacob at last, through grey lips.

"But it be," said Joshua, with an oath.

True indeed it was. The brothers, being men of uncommon force of character, had, perhaps naturally, set their hearts on a light-headed, vain girl, more than ten years younger than themselves. Of the two, she was inclined to prefer the handsome Joshua, divining with a woman's instinct that under the stony mask of his indifference lay a headstrong, passionate nature that would be easier for a clever wife to rule than the immovable obstinacy of the elder brother. She accepted Joshua, and would have been content if there had been no chance of winning Jacob. But when, on the day following Joshua's proposal, the elder brother had also asked for her hand, she found herself in a difficulty. Local gossip had given her some idea of the provisions of the father's will, and there was a glamour about the owner of the freehold, who was also the richest man within her reach. Unable to make up her mind, she had found temporary refuge in promising herself to both, looking to time, to circumstance, to accident, for the final settlement of the question. She had meant no harm, but, being quite without seriousness, had given no thought to the possible effect of her duplicity on natures such as theirs.

Not another word was spoken, but both the brothers felt sick at heart, understanding that the old days of confidence and affection were over; that, having been dear friends since infancy, they were now, and possibly forever, to be enemies. They knew each other too well to look for any self-sacrifice. Joshua's passions, as Jacob knew, were fierce. He would set to work to gain his object with the savage thoroughness that made him so valuable an assistant on the farm. And more than once already, in smaller matters, Joshua had dashed himself in vain against the obstinate perseverance with which Jacob, all through life, had done whatever he had made up his mind to do. Henceforth they were to be pitted against each other; and though the outer world might see no change in their manner, the difference in their hearts would be beyond expression.

For a time there was outward peace. During the next few days they went about their work as usual, and sat opposite each other with pipe and mug at night; but there were moments when the sentimental Jacob felt near to tears, and the morose Joshua battled fiercely with an ever-increasing temptation to physical violence. They did nothing in a hurry. Neither of them made any attempt to see the girl who had lightly promised herself to both; but the shadow of their determination, each to win her for himself, lay between them, and life was bitter.

The girl, wondering at the prolonged absence of her lovers, and fearing lest both had abandoned her on learning her duplicity, found it convenient one morning to be in the neighborhood of their farm about the hour when they returned to the house for dinner. When the brothers, crossing a field, caught sight of the white sun-bonnet and rosy face over the hedge, they stopped and looked into each other's eyes. Reading there the same expression of relief at the chance of an immediate settlement of the question, they walked side by side through the gate and faced the girl in the road.

"Nanny," said Jacob, kindly but sternly, "we do want to speak to 'ee."

She had made up her mind to scold them archly for their neglect, but as

she looked at their faces she lowered her eyes.

"Well, Mr. Addis?" she said, flushing.

"Thou be a foolish wench to make trouble where no trouble was. And 'twould serve 'ee right to be left 'usbandless forever."

The girl tossed her head.

"Oh, don't 'ee be afeard!" she said. "You bain't the only man 'ereabouts."

"Aye, but thou've a-set thy 'eart on 'avin' one o' us two; and one o' us two 'll 'ave 'ee. Now, then, which on us is it to be?"

She fidgeted with the strings of her sun-bonnet, and made no answer.

"I be the older," said Jacob.

"But I be the stronger," said Joshua.

"The farm be mine," said Jacob.

"But whether 'e do gain or lose, 'e be bound to pay me," said Joshua.

There was still no answer.

"Speak, my girl," said Jacob.

She looked about her, wildly, for a way out of her difficulty, frightened at the awful sternness of the eyes that were fixed upon her face.

"You be mighty serious about it," she said.

"Serious it be to us," said Jacob.

The girl laughed nervously.

"It be no laughin' matter," said Joshua.

She looked up into his eyes, the fine, grey eyes that had caught her fancy, and shot him an alluring glance. He frowned at her savagely, and she turned away her head. At last, unable to endure the strain any longer, she took refuge in affected indifference.

"Oh! drat the men!" she cried. "I can't be bothered. You must settle it atween 'ee!"

And with that she escaped down the road, but looked back to call impudently:—

"And come and tell us when you've a-settled it!"

Jacob turned to Joshua.

"Settle it?" he said; "'ow be we to settle it?"

But when his eyes met those of his brother, he looked away quickly, almost shuddering at what he had seen there. Joshua's hatred, like his other passions, was reckless; and it was hatred, active and murderous, that had leaped to life at the girl's light words. There was no need of speech to tell Jacob that Joshua's mind had conceived of one very simple means of settling the question, and that, sooner or later, his idea would be put into execution. But he neither showed nor felt fear. At the bottom of his heart his affection for Joshua remained unchanged. He walked home by his brother's side, and sat opposite to him at dinner, as if unaware that from that hour—for a time, at any rate—he must go in fear of his life.

He said nothing, but his looks and manner conveyed clearly enough to Joshua that he had read his thought and was not afraid. His iron obstinacy and self-control stood him in good stead, for at first it seemed as if Joshua's wild hatred were powerless against his cool defiance. Life had gone on as usual for three days, and Jacob was beginning to think that his suspicions were unfounded, when suddenly he learned his mistake.

Early one morning he started to drive into Marlbury market with a pig for sale. There was no sign that Joshua had left his bedroom, and Jacob, having harnessed the horse and seen the pig securely fastened under the net, set out alone. The horse was strangly nervous, and the pig more restive even than most of his kind; but Jacob thought little of it. He had driven some half-mile from the farm, and had reached the top of the rough descent where the rounded edges of the rocks jutted up here and there above the level of the road, when, looking back, he discovered that the pig had contrived to unfasten a few meshes of the net from the hooks of the tail-board, and was doing his best to leap out of the cart. Jacob stopped the horse, and leaning over the back of the seat tried to fasten the net from where he stood. He could not reach, and was obliged to dismount. The pig was once more secured, and Jacob about to climb back to his seat, when something in the look of the near-wheel caught his attention. He

stooped to examine it closely. When he raised his head again, there was an ugly frown on his brow. For a moment he stood in thought; then unharnessed the horse and led him slowly homewards.

Joshua was sitting down to breakfast when his brother came into the parlor. His teeth chattered a little, and he shifted uneasily in his chair as he saw the look on Jacob's face, but he said nothing. Jacob stared at him steadily, and took his place at the table.

"That trick 'bout the near-wheel o' the cart, Joshua," he said after a time, "weren't worthy of 'ee. Thou've never been aught but above-board, so far as I do know; and this bain't the time to begin. If that be thy notion o' settlin' the question 'bout the wench, well and good! But do it fair and square, man. Thou be bigger nor I."

Joshua's eyes glared murder. He turned red and white, and hurried from the room. But Jacob ate no breakfast, and there were tears in his eyes.

Throughout that afternoon the breathless August heat hung heavy over the parched upland. The sheep lay panting in the scanty shade of the hedges, or bleated the restless terror that takes them when the air is full of thunder. On such afternoons as this, Jacob and Joshua were wont to sleep for sheer lack of occupation, waking from force of habit at the same instant, when it was time to go and water the horses in the cool of the evening.

But there was no sleep that afternoon. With hot, white faces they roamed about the homestead, meeting often, but never speaking. The air, overcharged with the coming storm, made them, too, like the sheep, restless and nervous; their emotions were intensified till their habitual self-repression was powerless to conceal them. The mad hatred in Joshua's eyes dashed full against the stony defiance in Jacob's.

Coming, in the course of his aimless pacings, into the parlor, Jacob found his brother in the act of reaching his gun from the hooks in the ceiling beam. Once more the men's eyes met, and there was no need of words to explain what thought was in Joshua's mind. He tramped across the courtyard and down the path towards the field where they were used to shoot rabbits; and no sooner was he out of sight than Jacob began to pace slowly to and fro against the blazing white wall of the house, purposely making himself as easy an aim as possible. When half an hour had passed without the sound of a single shot, Joshua came back to put up his gun, baffled by his brother's show of defiance, but madder than before with rage.

At sunset came the thunder, heralded by a swooping rush of cold wind that turned the poplars white, and shrieked down the yawning chimney of the parlor. The heavy rain made a lake of the ill-paved courtyard, and blotted out the distant woods.

"That gun," said Jacob, as he lighted the hanging lamp, "wouldn't 'ave done 'ee no good, Joshua. They'ld 'ave proved un again' 'ee and 'anged 'ee. Thou must find a better way nor that, Joshua."

Joshua's answer was an angry snarl. The veins in his forehead swelled, and Jacob could hear his teeth grinding.

The silence that followed was broken by a loud knock at the door, and a farm-boy came in hurriedly.

"Mr. Addis," he cried, "the wind 'ave a-blowed down the railin's round the quarry in Top Close, and one o' thy sheep be fell over. They be 'most daft with fear, all on 'em. They'll all be over, unless thou goes up with the dogs quick."

Jacob rose, and said:—

"Will 'ee come, then, Joshua?"

"No! They be thy sheep. Look 'ee arter 'em for thyself."

Jacob fixed his eyes on his brother, and under the long, cold stare Joshua turned uneasily to his mug.

A flash of lightning flickered across the sky, and in the distance the thunder roared and rumbled.

"It be comin' this way," said the boy, as they splashed across the courtyard, with two frightened dogs cowering at their heels. Jacob stopped suddenly.

"I don't want 'ee," he said, almost roughly, to the boy. "Get 'ee 'ome, boy."

He waited at the gate till the boy was swallowed in the darkness, then stooped behind the wall and began to watch the house. The door opened, and against the sudden beam of yellow light he saw the black figure of his brother slinking out. The door shut noiselessly, and above the fitful wind came the sound of stealthy footsteps creeping away round the corner of the house. Jacob shook his head sadly, and muttered, as he strode across the slippery paddock, "Poor Joshua!"

A long and difficult climb lay before him. After many weeks of drought the ground was too hard to absorb the sudden rainfall quickly, and the soaking surface gave no foothold. With the aid of his crook Jacob slipped and stumbled up the steep down, and every moment brought the storm nearer. The lightning became more frequent, the peals grew shorter and louder, and in the intervals he could hear plainly the scampering of the maddened flock to and fro. Another flash revealed the sheep circling in and out among themselves in a far corner of the field.

"Hey, Trusty! Hey, Scot!" he shouted; but the dogs crouched closer to his heels.

"Get on, will 'ee?" he cried, impatient of their terror.

The dogs crept forward reluctantly. He shouted encouragement till they warmed to their work, and in ten minutes the gate in the adjoining field was shut and the flock was out of danger.

With nothing but the intermittent flashes to light him, he had found it impossible to count his sheep. There might be one, there might be half a dozen in the quarry, and he must go and see. There was no time to be lost if he would save their lives. Yet he hesitated, peering blindly through the darkness in all directions before approaching the brink of the pit. He saw nothing. Apparently he was the only human being on the down.

It might save him a needless journey down the hill, round the side of the quarry, he reflected, if first of all he looked over the edge to see if any of the sheep which had fallen over were still alive. The lightning was bright enough to show him that. Half the railing had pitched forward out of sight, and a sheer drop of a hundred feet lay open to the field. Partly to save time, and partly with the same object that had led him to make himself an easy mark for his brother's gun in the afternoon, Jacob walked slowly to the brink and prepared to look over.

The grass grew long and stiff on the edge, and as he dropped on his knees he gripped a handful tightly in each hand, digging his fingers deep into the heart of the tufts. A stone dislodged itself. He listened; and hours seemed to pass before he heard it strike the bottom. Involuntarily, he looked quickly to right and left over his shoulder; and then, as if ashamed of his nervousness, lowered himself, slowly and steadily, full length to the ground, and drove the toes of his heavy boots into the softening earth.

The lightning pierced to the bottom of the black pit and showed him, far below, the dead body of a sheep, a little patch of white upon the brown stone.

"Only one," he muttered, preparing to get to his feet.

He had heard no sound but the wind, the rain and the thunder; but at that instant he felt what he had all along expected—the grasp of his brother's arms about his waist. He tightened his hold of the ground with hands and knees and feet, hoping that, if he could but hold out against the first attempt to hurl him over, Joshua's murderous rage would die, at least for the moment, under his withering defiance.

The attempt was never made. A long, jagged flash ripped the black sky; instantaneously the thunder crashed overhead, and the arms that were about Jacob's waist loosed their hold suddenly. Joshua fell backwards and lay still.

Jacob sprang to his feet. Another flash showed his brother lying in a twisted heap a yard from the edge of the quarry, with his drawn, white face turned upward. He dragged the body

further into the field, and knelt down to put his hand over Joshua's heart and his cheek close to his mouth. The heart was beating, the breath came evenly. He was alive, but unconscious.

The storm rumbled and rattled away into the distance, and died at last. The rain blew over, and the stars shone out. Hour after hour of peace and silence went by, and still Jacob Addis stood deep in thought, waiting by the senseless form of his brother. Behind him in the east the light grew slowly stronger; the wet grass began to glisten; and, just as the first beam of the rising sun tipped the hedge on the horizon, Joshua moved.

He sat up and rubbed his eyes. Jacob laid a hand on his head.

"Who be that?" said Joshua.

"It be I—Jacob."

"Where be I?"

"Top Close."

"What for?"

"Thou come up to—to look arter the sheep in the thunderstorm."

"I don't remember," said Joshua, shaking his head.

There was a long silence. Then Joshua spoke again.

"I do feel powerful sick, Jacob."

"Thou've 'ad a accident, Joshua."

Again he shook his head, saying, "I don't remember." After another long silence, he said, suddenly, "It be a main dark night, Jacob."

Jacob stooped and passed his hand close over his brother's open, staring eyes. Then he turned away with a low sob.

"What do 'ee say?" said Joshua, sharply.

"Can 'ee stand up, Joshua?" asked Jacob, returning to his side and grasping his arm under the shoulder.

Joshua got laboriously to his feet, and Jacob turned him round. The sun, by this time full above the horizon, struck on his face; but his eyes never blinked. After a moment he said querulously, "Take thy 'and from my face."

"My 'and, Joshua?"

"Aye; it be near my face. I can feel it."

"Nay, Joshua, it bain't my 'and."

"There be summat warm on my face."

"That—that be the sun, Joshua."

The answer came in an awe-struck whisper.

"The sun?"

"Aye," sobbed Jacob, breaking down at last. "Joshua, boy, thou be gone blind."

There was no answer. Joshua stood motionless, facing the sun, and Jacob turned his back to it and covered his face with his hands.

"Take me 'ome, Jacob," said Joshua at last, in a whisper.

Jacob put his crook into Joshua's left hand, and took hold of his right arm. Not a word was spoken as they slipped painfully down the steep, wet hill, and in silence they crossed the courtyard and entered the house. No one had seen them come in; and Jacob, having led Joshua to his accustomed seat in the ingle, pulled down the blinds and locked both the doors. Breakfast lay ready on the table. He poured out a cup of tea and put it into his brother's hand. Joshua drank eagerly, but would not eat, and Jacob sat down opposite to him in the chimney corner.

After a time a grim, shadowy smile passed over Joshua's lips.

"It be settled now, Jacob," he said.

Jacob's answer rang loud and harsh: "Aye, it be settled now! Thou bide and see."

He unlocked the door and stepped out into the courtyard. "Tom! Tom!" he called.

The farm-boy came out of the barn.

"Come 'ere," said Jacob. "Tom, I want 'ee to run down to the 'King's Arms' and tell Miss Pinnell as the question be settled—she'll understand 'ee—and will she be so kind as to step over 'ere at 'er convenience? Can 'ee remember that, Tom?"

"Aye, Mr. Addis."

When the boy had gone Jacob went back to Joshua.

"Thou bide and see!" he said again, and neither Joshua nor he noticed the cruelty of the counsel.

"What be goin' to do, Jacob?" said his brother, querulously.

"Thou'll see."

"Jacob," said Joshua after a pause, "I be a blind man, but I be a man still; and, if thou do think as I be goin' to sit 'ere while she and you——"

He tried to get to his feet, but sank back helpless, with something of the old rage struggling for expression on his face. Jacob returned to the chimney corner.

"Joshua," he said, "we've a-been good friends, thou and I, till late, for many a long year."

"Thirty year and more, Jacob," said Joshua, sadly.

"And we be good friends again now, Joshua?"

"Never!" said the blind man, fiercely. "So long as you and she——"

"Thou bide and see," said Jacob again.

"I can do naught else but bide now," said Joshua, "and thou do know it, Jacob. And yet thou've a-sent for the wench a'ready. Eh! but I s'pose thou be right. It be thy turn now. But I'll not bide 'ere!" he cried, with one more effort to stand up. "I'll not bide 'ere to——"

Jacob's hand was heavy on his shoulder; and as Joshua dropped back again on to the settle he heard once more his brother's counsel to "bide and see."

An hour of silence passed before a light step was heard on the flag-stones outside the window, and Nanny Pinnell knocked for admittance. Delight and apprehension and curiosity had brightened her beauty to more than usual sweetness; she enjoyed the strangeness of the courtship, and looked forward to an exciting moment. But when she saw Jacob standing stiffly in the centre of the dim room, Joshua sitting erect in the chimney corner, and the eyes of both brothers fixed steadily upon her face, her spirits fell before the sternness of those silent men.

"Sit 'ee down, Nanny," said Jacob, pointing to a chair.

She obeyed him, though her immediate desire was to run from the house.

The silence began again, and lasted till the girl felt forced to speak or scream.

"Well, which on 'ee is it to be?" she asked with an effort after coquetry.

"We've a-settled the question," said Jacob, slowly, "and it be Joshua."

A hoarse cry came from the chimney corner, and the sudden leaping of Nanny's heart told her that it was Joshua she would rather have. She looked towards him eagerly, expecting him to hurry to her side. But he still sat erect and motionless, with wide eyes fixed on her face.

"Well," said Jacob, "why don't 'ee go to 'un?"

Something in Joshua's appearance frightened her; and she rose timidly with a side-glance at Jacob. She took three steps, and stopped. Fascinated by his stony glare, she moved nearer. And suddenly, just as she was within his reach, his great arms shot forward and grasped the air a little to one side of her waist.

The girl screamed, and the blind man's empty arms fell limply to his side. He bowed forward over his knees and groaned.

"Oh! what be it, what be it?" cried the girl, shrinking away from the man she had suddenly found horrible.

"Can't 'ee see?" said Jacob.

"'E be—'e be——"

She could not speak the word.

"Aye," said Jacob, "Joshua be blind."

She burst into tears of rage and shame.

"And thou do want me to marry 'un!" she cried. "A blind man!"

"Aye. Thou promised 'un."

"But 'e weren't blind then!"

"'E didn't need 'ee so much as 'e do now. 'E do want a wife now to look arter 'un."

She stamped her foot in fury.

"It'll never be me, then!" she said.

"Do 'ee mean that?" said the immovable Jacob.

"I'ld rather die than 'ave 'un!"

"Very well, then, my girl," said Jacob. "Out o' this 'ouse you go, and never a word from either o' us do you get this side the grave. Oh!" he went on, stung into unusual eloquence by his indignation, "it seemed a light thing to 'ee, no doubt, to play fast and loose with the 'earts o' two men. But it weren't a

light thing truly. See what thou've a-done, wench. Thou be come atween me and my brother Joshua, as 'ave been friends for thirty year; thou've a-filled 'is 'eart with evil thoughts, and made my life a misery, and thou've a-driven 'un blind. Look at 'un! Look at my Joshua! 'E come out last night to kill me because o' thee, and the lightnin' struck 'un. 'E be blinded, and all for the desire of a foolish woman as didn't know 'er own mind, and tried to play double with two men as was friends. Get 'ee 'ome, wench—get 'ee 'ome. We'll 'ave no more women comin' atween us, Joshua and I."

The shamed and frightened girl rushed from the room, and Jacob stepped slowly up to Joshua.

"Joshua," he said, taking one of the blind man's hands.

And the answer came choked by tears: "Jacob! brother Jacob."

. . . . . .

They are old now and bent, but inseparable and as silent as ever. You may see them in Marlbury High Street, Joshua leaning on Jacob's arm, on most market days and every Sunday. Joshua is always peevish and morose, but Jacob's expression varies. On market days his round, red face is aglow with good-humor, while on Sundays he looks pathetic and resigned; for Joshua, in the long years of his blindness, has "taken religion," and Jacob, who is still indifferent, is obliged to go to chapel with him.

HAROLD CHILD.

From the Academy.

OLD AND NEW ESSAYISTS.

It is a truism to say that essay-writing as an art is dying out; yet as a means of propagating opinion it is as popular as ever it was. The political essay, if we include all that class of writing which goes under the name of leader, is still in request. One of the younger journals has, it is true, successfully tried the experiment of dispensing with it, but the other morning and evening papers give no sign of intending to follow the example. Unfortunately, the work done for political journals affords no training of the right sort for the literary essayist. The leader-writer has every inducement to neglect the graces which we admire in an Addison or a Steele. To take up a clear, decided position, to be emphatic to the point of violence, to dispense with suggestive and delicate charm, are essentials to his success. His business is not to cater for cultivated taste, but to manufacture or propagate opinion. Moreover, he is compelled to work in a hurry, and he very well knows that he will be read in a hurry. It is, we fancy, a popular superstition that he lacks conscience. The journalist naturally takes the side favored by his own convictions, and fights for it with at least as much honesty as the average Member of Parliament who gives a steady support to his leaders. But the habits of mind engendered are fatal to the mental freedom, the "viewishness," the observation of whim and oddity, the humor, the moods and the melancholy which constitute the charm of those who write for no other cause than their own inclination. Yet the political writers shape public taste. Those who read many leaders lose the habit of looking for fine shades of expression, they have not patience with the old-fashioned essayist. And so it would appear that true essay-writing is falling into desuetude. The talent that went to produce it is engulfed in that tomb of genius—the modern novel.

Nevertheless, it is noteworthy that some of the keenest intellects of our day hold that neglect of the essay is but a passing fashion. They contend that sooner or later people will have a surfeit of gossip, biography and novels, and will turn with relish to a more tranquil kind of reading. As an example we might instance M. Maeterlinck. After obtaining the success, to put it in its lowest terms, of a very wide fame for his plays—perhaps dramatic poems were the better title—he has deliberately, though temporarily

only, forsaken stage work to attempt the essay. Yet it will be noticed that even he does not venture upon the experiment of writing "delightful articles upon nothing," in the manner of which Charles Lamb was the greatest master. On the contrary, he is inclined toward "the large leading article," only it is glorified as well as magnified. In other words, he has chosen the *rôle* of teaching or prophetic essayist. Emerson was his more direct model, but in his own way he is playing the same part that Ruskin and Carlyle played: he is using the essay not as a form of art, but as a means of propagating opinion. Probably he would object that this is an inadequate and too positive description of his self-imposed mission. Yet, after all, the somewhat obscure transcendentalism which he endeavors to inculcate is as much a matter of opinion as a view of Home Rule or a belief in anti-vaccination. Further, it is doubtful if his conclusions are of much importance, except in so far as they have been the thread upon which his fancies are strung. For the charm exercised by M. Maeterlinck is not due to what we generally call greatness of mind. You do not find in his work any wealth of invention, or deep and clear insight into life. Never was title more absurdly bestowed than that of the Belgian Shakespeare. We do not say this to belittle him, but to show that it is his own individuality that is so attractive. Often it is expressed purely and simply by the sound of the language—change the words into English and, though the meaning seems to be kept, the effect is gone. There is in the cadence a something wistful and mystic: melancholy, yet touched with a grace that belongs to the man. And because this is a personal gift it is better for M. Maeterlinck to speak with one voice than with twenty—to address us in monologue and not in drama.

That is certainly a distinction of the great essayists. Let us read "Elia," and Charles Lamb appears to be sitting in the chair opposite; read the "Letter to a Friend," and we feel as if the dreamy yet observant eyes of Sir Thomas Browne were watching; turn to one of the initial chapters of "Tom Jones," and you get to feel the character of the author, his learning, his genial irony, his perfect appreciation of life. So it is with Maeterlinck. Had he lived in the time of his favorite, Sir Thomas Browne, we can well imagine how he would have shared alike in the beliefs and superstitions of the great Norfolk physician; and if this medieval intellect had been re-born in the nineteenth century, a study of M. Maeterlinck may at least suggest an idea of the possible result. Over the mind of both flew thoughts "like great white birds;" and, when M. Maeterlinck's next book is published, it will probably be found that he has gained in the power of expression from a study of the older master. Again, by confining himself to one theme, instead of as before presenting us with a dozen slightly connected essays, he gives himself a better opportunity; and the subject he has chosen, Destiny, is one to evoke all those great sentiments that dignify his plays—compassion and awe and wonder.

But M. Maeterlinck is drawing us away from the main subject, and, interesting as he is in himself, he is scarcely of that type of essayist we are in search of. The first and greatest of the order was Montaigne, after whom we may place the *Spectator* group of writers and the contributors to the *Tatler* and similar sheets. Following them came Doctor Johnson, who all unwittingly led his followers astray, no one daring to break his fetters till the time of Charles Lamb. The *Edinburgh Review* and the *Quarterly* were very able journals in their youth, but they did little towards the improvement of style. It was, indeed, most unlucky that they came to be looked upon as models, especially as a writer so mannered as Lord Macaulay had the most influential place among their contributors.

The tradition was not broken till the advent of writers who are either living

still or dead only recently. Mr. Andrew Lang and the late R. L. Stevenson did more than anybody else to throw garishness into disrepute and implant a regard for the genuine merits of style. To a very large degree Mr. Lang has the personal charm that is a first essential of the essayist, and it is a quality entirely his own, resting on a sub-color of profound melancholy which is never quite out of sight even amid the sparkle and play in which he delights. But he has listened to the sirens that tempt a man from his true path. At the bidding of journalism he has treated the passing theme, the topic of the hour, so frequently that much of his best is linked to ephemeral subjects that were halfway to oblivion before the printer's ink was dry. And if you take away his fiction, his poetry, his book-prefaces, how small the residue of the best work! True, the second-best is not to be under-valued. His translation of the "Odyssey," his "Custom," "Ritual" and "Myth" are books to be proud of, yet the real essence of Lang is to be found only in his casual essays, and one can only wish there had been more of them. Mr. Stevenson, too, was tempted away from essay-writing by fiction, and it is doubtful if he gained thereby in fame, unless it be calculated by noses, for he might have been first in the one field whereas he has many equals in the other. He is to be praised beyond all else for this, that amid all the bustle and hurry of modern life he could impart to his work every external mark of ease and leisure —just as if he had lived in those quiet old times when an author gave years to the making of a book and his friends gave months to the reading of it. And then the pick of the essays were done in those gallant early days when the man who seemed born for perpetual youth still was young and circled by romance. They are not so far wrong who esteem this part of Stevenson most.

Yet his influence was not altogether for good—whose is? He loved to go in fine array, and it sat well on him. There were others to whom homespun was natural, and they made themselves ridiculous when they put on Stevenson's trappings. The first essential of a charming style is a charming personality. But to fall foul of a writer who, lacking that requisite, produces a colorable imitation by aping its possessor, would be absurd. If a plain woman uses paint and powder to rival the charms of a fairer sister, who shall blame her? Yet with all the rouge and belladonna she may use, she will come into no effective rivalry with natural grace and beauty. In writing, however, personal charm, though it counts for much, is not everything—is, indeed, naught, unless accompanied by skill in expression. "Know thyself" is the motto a young writer should print above his study door, and engrave on his heart. For in his callow days he sees no difference between admiration and possession. To appreciate the pensive rhythm of M. Maeterlinck's prose is no guarantee that it can be copied; on the contrary, it has been felt by those whose gift it is to write the sparkling, many-colored, slang-besprinkled style of the modern realist, aimed at the eye rather than the ear; or, to take a strongly-contrasted figure, who does not admire that singular compound of frank burliness and almost super-refined taste that we see in Mr. Henley? Yet to imitate the peculiar outcome would be to court artistic ruin, unless, indeed, the imitator were a re-incarnation of his model. Truisms, you object; but how little they are regarded? It would be invidious to mention more names, but let any one think of the men who attempt essay-writing, and he will have a list of flagrant offenders. Some appear unable to write without getting on as much "side" as a cabinet minister rising to make a speech; others are constrained, formal and awkward; many affect little gifts and graces that do not belong to them; not one in ten thousand dares to be simple and natural.

But thereby hangs another tale. If all writers took to heart this maxim, and each resolved to be himself and

no other, to assume no virtue he does not actually possess, to let the real ego paint itself on his canvas, what would we have gained? A wholesome change, no doubt, but also the materials for a new "Dunciad" stripped bare of its clouts and wraps. It is all very well to say, Do not try to be Mr. Lang or Mr. Stevenson, M. Maeterlinck or Guy de Maupassant, Mr. Meredith or Mr. Swinburne; but what if there is no self greatly worth being? Simplicity is a high virtue in a highly gifted individual, because the more charming his personality is the more clearly would we see it, the less veil or curtain do we desire to hide him. For instance, I have no personal acquaintance with Mr. Blackmore, and yet I feel sure that it would be impossible to know too much of him; the charm of a rare personality redeems the worst of his books and glorifies the best. I am confident that his lightest prattle as he smokes beneath his own fruit trees must be delightful. But there are many more who are very popular and yet do not inspire the feeling. Take the author of—well, the most widely sold book of its year, and you know very well you would rather see him in his "get-up" than in his ordinary clothes. *O sancta simplicitas*, not always are you Blessed! Be yourself, therefore, is a piece of heroic advice, a counsel of perfection for those who consider themselves born with the gifts and outfit to tread the paths of genius—that thorny and difficult way. It is no maxim for those who are but lords of a naked land, and are afraid that its poverty will be spied upon.

Nevertheless, the revival of the essay, if it ever takes place, will be accomplished by some one daring to step out of the beaten path and to follow this road. But he has to be born with the natural gift and temperament before he is made an essayist. We have many writers who defy the conventional with more or less pleasing results, and yet do not succeed in adding to any except the most ephemeral of literature. There is a frankness that is merely brutal, and many young writers carry out half of the advice of Polonius, "Be thou familiar, but by no means"—what the new journalist is. Our essayist, when he comes, must know how to be familiar without losing elegance, colloquial while maintaining the sweetness of finished prose, full of humor with a sadness of his own, and a merriment of his own, wise with the wisdom of the vanished centuries, yet young and responsive to the sympathies ever renewed of a world whose springtime and harvest follow now even as they did in the twilight of the ages. He will come most probably in the time and manner least expected; but one would be inclined to look for his advent from the ranks of professional writers. They are too feverish and eager, too keen to swim with the popular current. No, perhaps the next great book of essays is being now written in some quiet country house, whose owner is indifferent to current opinion, though alive to current tides of thought. It is from one who combines learning with leisure, a love of retirement with a knowledge of the world, one whose moods incline him as often to laughter as to tears, that we expect the volume to come. For such a man is in the position of a spectator. He is not, like the active man of letters, himself engaged in the fray, but, occupying a point of vantage outside its dust and clamor, can note its strange commingling of gross and beautiful, of comedy and tragedy, of tears and laughter.

From The Spectator.

MORE "BULLS" FROM IRISH PASTURES.

To the Editor of the Spectator.

Sir,—The propensity of the Irish people to make "bulls" is undoubtedly a deep-rooted national characteristic, and it will probably be one of their mental attributes to the end of time, or until the race is radically transformed—a consummation *not* to be wished for, indeed. This gift—for

there is really something to be proud of in its possession—is not, as is commonly supposed in England, confined to the lower, or perhaps it would be better to say the uneducated, classes. It is certainly more widespread among the humbler folks; but very often amusing examples of it come tripping from the hasty tongues, and even from the leisurely pens, of educated and well-to-do people. In a recent annual report of a benevolent society having its headquarters in Dublin, the following delightful sentence occurs: "Notwithstanding the large amount paid by the society for medical attendance and medicine, very few deaths occurred during the year." A Cork newspaper published a report of an open-air political meeting, in which this paragraph appeared: "Mr. M. A. Brennan next spoke at much length in his usual happy style, but from the distance we were wholly unable to catch the purport of his remarks."

Even the Commissioners of National Education in Ireland are occasionally subject to this strange, but laughable, confusion of thought and utterance. In a Parliamentary Bluebook, containing the annual report of the Commissioners of National Education, and signed by these august personages, the following titbit may be read: "The female teachers were instructed in plain cooking. They had, in fact, to go through the process of cooking themselves in turn."

But it is, as I have said, amongst the peasantry as a class that the making of "bulls" more widely prevails. A country woman walking through the streets of Limerick caught sight of a small coffin displayed as a gruesome trade sign in an undertaker's shop window. "Oh, glory be to God," she exclaimed, "is it possible that coffin can be intinded for any livin' crature?" The owner of a valuable horse was very indignant with his stable-boy for having allowed the animal, which he had taken out for a morning trot, to take head. "The divil a bit o' me could sthop him, sir, for I had no spurs," was the boy's strange excuse. An amusing story was told me by a friend who is a dispensary doctor in a union in the south of Ireland. One night he was awakened by a rapping at the front door of his residence, and going to the window, saw a laboring man below. "What's the matter, my good fellow?" he said. "'Tis me ould mother that's tuck bad, docther," replied the man. "Have you been long here?" asked the doctor. "I have thin, yer honner." "And why on earth didn't you ring the night-bell?" "Sure, I was afraid I'd disthurb yer honner," was the man's perfectly sincere reply. No doubt, with the Irish peasant's desire to make himself as little troublesome as possible to his betters, from whom he has to ask a service, the man had a confused idea that rapping at the door would disturb the doctor less than ringing the night-bell.

"Bulls" often originate in a misunderstanding of the meaning of the words or terms. A lady asked a widow whether her son was still in the orphanage in Dublin. "Och no, me lady," was the reply. "Sure he's an orphan no longer. He's now workin' at a 'thrade outside." At an inquest held recently in Galway concerning the death of a child under rather suspicious circumstances, a quack doctor, who attended the child, stated in the course of his evidence that he had given him ipecacuanha. "You might as well have given the Aurora Borealis," said the coroner. Now, there is one thing an Irish peasant will not do, and that is, acknowledge his ignorance of any subject, so the quack doctor returned the prompt reply: "And sure, yer honner, that was the very thing I was goin' to give him next is he hadn't died just thin!" The incapacity of the average Irish mind to rapidly grasp the import of numbers is also the fruitful source of "bulls." Every one will remember Charles Keane's picture of the stevedore at the hatchway, shouting down to the men in the hold: "Now, thin, how many of ye is down there?" "Five of us." "Thin, half of yez kum up directly," cries the stevedore.

The light in which domestic service is regarded by some servants in Ireland is illustrated by an amusing anecdote which was told by a lady in a letter written to a Dublin newspaper some time ago. A young country girl called on her in answer to an advertisement for a general servant. "Have you a reference?" asked the lady. "A riference!" exclaimed the girl in injured tones. "What do I want that for? Sure, 'tis I've got to live with you, and not you with me!" That letter led to the relation by a second mistress of the story of another laughable "bull." One day her servant answered a knock at the hall door. "Who was it that called?" she asked the maid subsequently. "It was a gintleman, ma'am, lookin' for the wrong house," was the reply. There is a story told in journalistic circles in Dublin of a delightful display of 'cuteness by a farmer who called at one of the newspaper offices to have an advertisement inserted. He was informed that the charges were 6*s.* for the first insertion, and 2*s.* 6*d.* for the second. "Faith, thin," said he, "I'll have it in the second toime." Here are two comical "bulls," due to the Celt's lightning rapidity of thought: "Is it a son or a daughter your sister, Mrs. Healy, has got?" asked a gentleman of one of his tenants whom he met on the road. "The curse of the crows on me, but I don't know whether I'm an uncle or an aunt," was the immediate reply. I was once present at a review of a militia regiment in the south of Ireland, when the sergeant-major came up and reported to the colonel that all the ammunition was exhausted. "Then sound 'Cease firing,'" roared the commanding officer. At Killarney every visitor hears some laughable stories. Here is one—new and fresh, I think—which I picked up during my last visit to the glorious lakes. A number of boatmen who were quarreling about the division of "tips," indulged at the top of their voices in a good deal of profane language, which the marvellous echo repeated verbatim. "Arrah, look at that now for a schandal," said one of the party who was of a pious turn. "Tachin' the poor harmless echo to curse and sware."—I am, Sir, etc.,

A. B. C.

From The Saturday Review.

A PLEA FOR NATURE'S SCAVENGERS.

We human beings are odd in our attitude towards the animal world, in our likes and dislikes of the creatures of our own class and other classes of animals. We seem to base our feelings on no logical ground of reciprocity of goodwill, of gratitude, or the reverse, but rather on some almost inexplicable whim. Certain creatures are, without reason, given a bad name, and no proof of service rendered will ever reinstate them. Others are popular favorites, and may steal grain and make life hideous with their discordant cries. The entire snake tribe, for example, is anathema with all right-minded folk, though if they were asked the reason of their prejudice they would, with a pitiful and superior shrug, be driven back in all probability on the ridiculous translation of Holy Writ, which, however deep in its charm, cannot be relied upon in matters zoological. It is a fact that, though few would credit it, a gentleman, charged not long ago in an evening paper with needless persecution of our common, harmless snake, quoted in his defence some ancient injunction about bruising the creature's head in retaliation for an apocryphal bruising of his own heel. As a matter of truth, and not Scripture, serpents do not bruise our heel, but are only too glad to glide away from it. I understand that in the breeding season there are certain Indian snakes that resent uninvited witnesses of their nuptial ceremonies, and go the length of chasing them off the premises. This may, or may not, be the case; but I have tramped after kangaroo through miles of tall grass simply infested (as proved by periodic fires) with snakes, venom-

ous and otherwise, without coming in contact with one, although gaiters to the knee were *de rigueur* on such occasions in case of accident.

The vituperation, however, reserved for the reptile is not more forcible than that meted out to the whole unpaid company of nature's scavengers, and it is to this very remarkable ingratitude that it seems time to draw attention. It cannot, it is true, be claimed for these useful servants that they possess beauty or charm of manner; but there are folks who are ornamental, others merely useful, and the earth would not be pleasant without either. It would not, for instance, be correct to assert that the gentlemen who, under the auspices of the sanitary board, impel gentle streams of water down the classic and verdant slopes that lead from Covent Garden to the Strand are among the most picturesque individuals in that neighborhood, but it would be equally futile to deny their place in the scheme of the creation. Death is ever busy to render this earth an unclean abode. This, apparent even in these latitudes, has a very much more serious aspect in tropical lands, where the burning cares of a pitiless sun brings decay close on the steps of death, and the corpse of but an hour old is already at work poisoning the surrounding air and spreading the germs of disease. To frustrate this baleful work nature has enlisted an efficient army of scavengers, drawn from all classes, and commissioned to keep pure the earth and cleanse it of all that is foul. It might be expected that a rational generation would not be slow to recognize the value of such officials, and would give them at least protection and consideration. Yet it is actually a fact that, so far from according these invaluable creatures the same kindly forbearance that is given unstintingly to thousands of small fowl, more picturesque perhaps but certainly more harmful, we have not, most of us, a good word to say for any one serving in the scavenging brigade, and the encomiast who should plead their cause, individually or as a class, would run the risk of being voted eccentric. The very names of the creatures call up all the worst epithets applicable to the brute world. Vultures are repulsive; hyænas, for all the world as if they subscribed to the National Church, are called sacrilegious because they rifle graves; for sharks, no term is strong enough, and the honest sailor who occasionally contrives to haul one of these ocean scavengers aboard metes out to it treatment that would be worthier of the Grand Turk of tradition.

Nature, not being a European Power, keeps her forces in readiness where they are needed, in consequence of which the scavengers muster in strength in hot countries. Vultures wander but rarely to these parts, and such sharks as occur are, with few exceptions, but minnows of their race. Yet we have even in these islands humbler purifiers at work, tadpoles and burying beetles, and others suitable to the comparatively easy work that falls to them. One of these days, when natural history is taught in a rational manner in our schools, when the rising generation learns to appreciate the living world around instead of banging pianos and splashing pigments, we shall have a recantation of the modern zoological faith and a better appreciation of the beasts and birds. We shall find nothing to shudder at in the meal of the vulture, but we may, on the contrary, even learn to protect that remarkable bird and its fellow scavengers as among the worthiest of earth's children. To the last the vulture is active in its allotted mission, and when at length it falls, no living beast or bird or insect will touch its body, and it must crumble quietly to dust, a lasting—somewhat too lasting, as those know who have camped near an undiscovered dead vulture for some days—monument to the usefulness of the great scavenging army of which it once was so active a member.

F. G. Aflalo.

From The London Times.

RURAL RUSSIA.

It is certainly a somewhat startling fact that there exists, within the confines of Europe, a people numbering over sixty millions among whom no British products of any kind are known. It becomes even more striking when we find that Great Britain, on the other hand, is one of their best customers, consuming produce of theirs to the value of many millions sterling per annum. The strangeness of the fact is by no means diminished when we discover on further investigation that the greater part of the products we receive from these sixty millions of people have been paid for by articles that we could easily have supplied them with ourselves, but which they now import from our principal industrial competitors on the Continent.

A careful examination of our trade with Russia reveals, nevertheless, the existence of this abnormal condition of affairs. Large as our exports to Russia are, nearly all, with the exception of agricultural machinery, are destined for the urban districts alone or their vicinity. On the other hand, our imports from Russia, consisting mainly of raw materials and food products, are derived almost exclusively from rural districts. The conditions of existence in the urban districts of Russia differ so widely from those of the rural, and the commercial and financial relations between them are often so slight, that this circumstance possesses a far greater importance than it would have in any other country in Europe. Indeed, in our trade with Russia, so far from our purchases assisting in extending the sale of our own products, our position is nearly the same as though we were buying exclusively from one country while selling to another without purchasing anything in exchange.

But there is another fact that we must bear in mind. The urban population of European Russia amounts to less than thirteen and five-tenths per cent., and, even if we add to them the inhabitants of those districts within which alone, as will be explained presently, our British agricultural machinery as now exported can possibly be employed, our Russian customers can only be found among at most thirty per cent. of the entire nation, leaving seventy per cent.—fully sixty millions—whose produce we purchase largely, it is true, but who receive no British products from us in exchange.

Our train draws up at a small station on the main line, and, leaving our compartment, we enter a sumptuous waiting-room provided with a buffet that we should find it hard to equal for comfort in any railway station in England, except in our largest towns. It needs but a step from that station to our carriage, but that step has taken us from Western civilization into—but we shall see. A long drive of over sixty miles lies before us, and we shall not have passed over two-thirds of that distance ere my imaginary companion will fully understand why British agricultural machinery, highly appreciated though it is, can rarely penetrate more than some forty miles from the nearest station. We follow a "road" in which our carriage sinks to the axles in sand or mud, and cross bridges over innumerable slow-flowing rivers, formed of untrimmed pine-poles, without a parapet, and which would assuredly break down beneath any weight exceeding half a ton. Onward we go along our toilsome way, now through miles of almost virgin forests, then between immense fields of corn, potatoes, flax or cabbages, the estate of some large proprietor—almost certainly an absentee, and whose lands are probably mortgaged to the utmost kopeck of their value. Again and again we quit the road and drive over the adjoining meadow or moor land in the vain hope of finding a more solid foothold for our horses.

We pass through many villages upon our way, and at one of these we will pause for a moment, as a glance around will teach us several lessons of no little value to our investigations. The cottages, all built of wood and straw thatched, are crowded close together, but at the end of the village is one of

much larger dimensions and evidently not a dwelling house. This is the *svietelka*, but first let us glance at the peasant lands adjoining. We are struck by the small patches of cultivation into which they are divided. At the emancipation each peasant family received an amount of land that was then amply sufficient for its support, but the population increases rapidly, and through subsequent subdivisions but few of these little holdings would now suffice for the maintenance of their present owners. Over the greater part of Russia this land is held upon the "communal" system; in White Russia, on the contrary, that of individual ownership was adopted. During the thirty-seven years that have elapsed since the emancipation, the peasants have been gradually paying off their debt upon this land by annual instalments. But as, even when their purchase is complete, they will still be unable to sell their property, they are naturally reluctant to abandon the land for which they have already paid so much. Overcrowding therefore continues, and the large *izba* I have mentioned represents the only remedy available. If the peasants can no longer support themselves upon their land, they must perforce seek their livelihood in industrial labor; and, as the majority of them cannot quit their land to seek that labor in the factories in the towns, the factories must come to them.

To this is due the remarkable development of village industries (the Kustari trades) of which but little is known in England, but which are destined to effect a complete transformation in the economic condition of Russia in the near future. The development of Kustari industries furnishes almost the only means of avoiding the evil that Russian statesmen most dread—the conversion of the loyal and conservative Russian peasantry into a starving and revolutionary proletariat. But it does far more. The Russians firmly believe that they are destined to occupy the first place among the manufacturing nations of Europe, and these Kustari villages serve as excellent nurseries for the vast horde of workers for whose products in the future Russia is so actively securing new markets in the eastern world. Already very many of these Kustari villages, in widely separated districts of Russia, are becoming industrial centres of importance, in which hand-labor is being replaced by machinery with all the most modern appliances and an elaborate system of division of labor.

The Air Near Trains in Motion.—Professor F. E. Nipher has recently measured the frictional effect of moving trains upon the air near them. His apparatus consisted of a hemispherical cup, which he could fix at distances up to thirty inches from the window of a railway carriage. The mouth of this collector was turned towards the direction in which the train was moving at the time of observation; and the pressure due to the motion was conveyed to a pressure-gauge by means of an india-rubber tube attached to the back of the collecting cup. The results obtained show that a large amount of air is dragged along with a rapidly moving train, the motion being also communicated to air many feet away. Most people believe that it is dangerous to stand near a train going at full speed, and Professor Nipher has now proved that the moving air is a real source of danger. The air not only possesses sufficient power to cause one to topple over, but it also communicates a spinning motion tending to roll a person under the train if the nature of the ground does not prevent such a result.—Leisure Hour.